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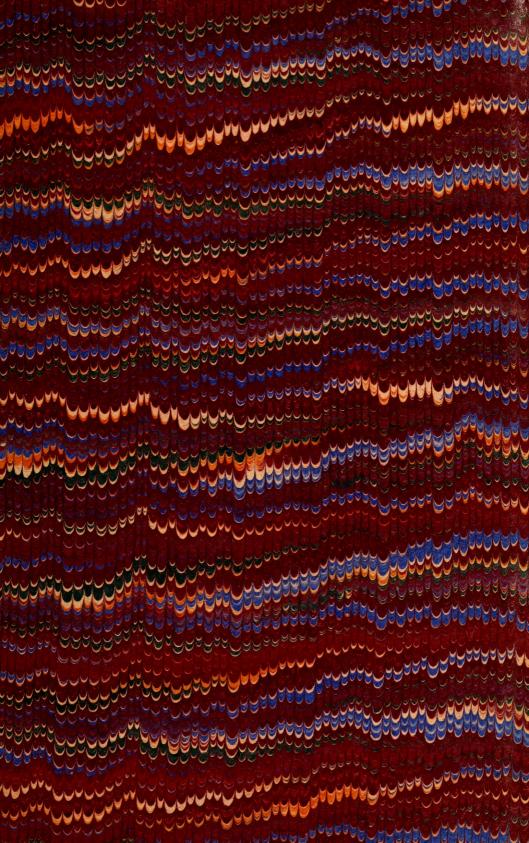


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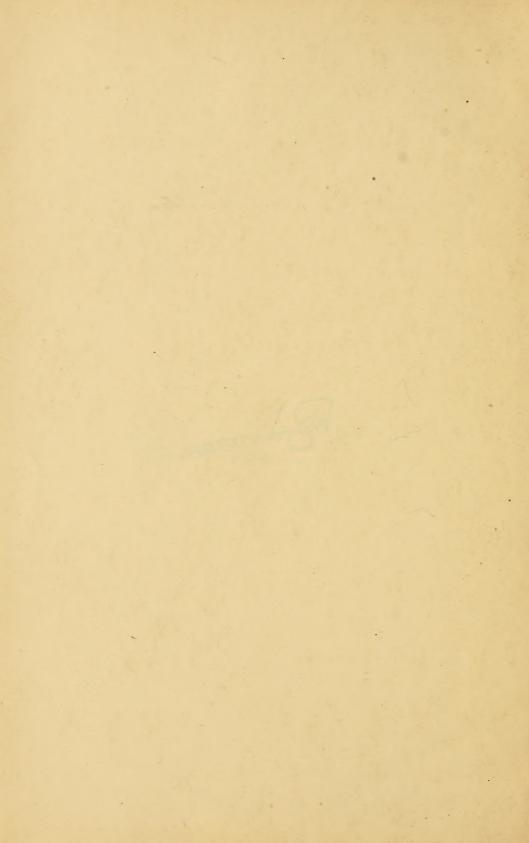
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### REPORT

OF THE

# DEPARTMENT OF MINES

## OF PENNSYLVANIA

## ANTHRACITE REGION

1903

WM. STANLEY RAY STATE PRINTER OF PENNSYLVANIA 1904 TN 805 P4 P3 1903



### LETTER OF TRANSMITTAL

Department of Mines, Harrisburg, Pa., April 25, 1904.

To His Excellency, Samuel W. Pennypacker, Governor of Pennsylvania:

Sir: In compliance with the acts of Assembly of June 2, 1891, and April 14, 1903, I beg to submit herewith for transmission to the General Assembly, Volume I of the report of the Department of Mines for the year ending December 31, 1903. This report covers in detail the operations of the fifteen Anthracite Districts as returned by the respective inspectors, with tabulated deductions made in this Department. Some observations and suggestions relative to accidents, child labor, care of injured employes, election of Inspectors, and the general conditions and prospects of the coal industry are also submitted and respectfully called to your attention.

This is the first report made under the act of 1903, by which the Department of Mines was created to supersede the Bureau of Mines, created by the act of July 15, 1897. For the sake of convenience the operations of the two great coal regions of the Commonwealth are published under separate covers, designated as Volume 1, Anthracite, and Volume 2, Bituminous. As there are now fifteen inspection districts in each region, it was deemed advisable to adopt this method of presenting the data.

Respectfully submitted,

JAMES E. RODERICK,

Chief of Department of Mines.



### REPORT

OF THE

# DEPARTMENT OF MINES

#### INTRODUCTION

The year 1903 was one of remarkable prosperity in the coal industry of Pennsylvania. New records of production were established in both the anthracite and bituminous regions, and for employer and employe alike the period was one of unprecedented success. The production in the anthracite region, with which this part of the report has to deal, amounted to 67,171,951 gross tons. The long and disastrous strike of 1902 had depleted the supply of coal to such an extent that it required full and continuous work at the mines for the first ten months of 1903, to restore the normal conditions of the trade in this country and Canada. During November and December, however, the production was greatly curtailed, owing to a cessation in the demand, and most of the operations closed down completely on the 24th of the latter month. Had the same ratio continued throughout the year, the production would have been about 73,000,000 tons. As stated in former reports, it is evident that the high water mark in the daily production of anthracite coal has been reached, although the annual production may be increased. The number of working days, however, can hardly exceed 250 in a year, as the repairs to the mines, inside and outside, require many weeks, and the loss of several weeks more is caused by various accidents, explosions, flooding and caving-in of mines, and breaking of machinery. Taking 250 as the maximum number of working days, and

320,000 tons as the maximum daily production, we find the possible production for the year to be 80,000,000 tons.

It is also probable that the cost of mining anthracite coal will increase each year, for the reason that the most accessible and most easily worked seams are rapidly being exhausted, necessitating the working of deeper seams and in many cases much thinner ones. The cost of producing coal from a two foot seam is considerably greater than from a six or eight or ten foot seam.

Of the 67,171,951 tons produced during the year, 60,231,104 tons were shipped to market, 5,710,341 tons used for fuel at the collieries, and 1,230,506 tons sold to local trade. The increase in production over 1902 was 30,260,397 tons, and over 1901, the banner year, 7,266,000 tons.

#### Accidents

In producing the vast tonnage of 1903, 518 lives were lost in and about the mines, 426 inside and 92 outside. Besides this great loss of life, 1.127 employes were injured inside the mines and 198 outside. The number of widows caused by these fatalities was 269, and the number of orphans 592. For every life lost 129,676 gross tons of coal were produced; for every injury 50,696 tons, and for every fatal accident inside the mines 157,681 tons. In order that fair comparisons may be made with the accidents in the bituminous region, it is necessary to confine the computations to the casualties that occur inside the mines, as the great number of surface employes in the anthracite region do not produce coal; they simply prepare it for market. During the year there were 92 lives lost outside the mines in the anthracite region, by machinery, cars, etc. This is 17.76 per centum of the total number.

The total number of employes in and about the mines during the year was 151,827, and the number of fatal accidents per 1,000 was 3.41. The number employed inside the mines was 102,055 and the number of fatal accidents per 1,000 was 4.17. The number employed outside the mines was 49,772, among whom the fatalities per 1,000 were 1.85.

It is pleasant to call attention to a slight decrease in the fatal accidents inside the mines. In 1899 the percentage per 1,000 was 4.22; in 1900, 4.26; in 1901, 4.47, while for the year covered by this report it is 4.17.

It will be seen by reference to Table B that 210 fatal accidents, or 49.30 per cent. of the total number inside the mines, were caused by "falls;" 70, or 16.43 per cent. by cars; 26, or 6.10 per cent. by explosions of gas; 55, or 12.91 per cent. by powder and blasts; 31 or 7.28 per cent. by falling into shafts and slopes; 12, or 2.82 per cent.

by mules and by suffocation; 22, or 5.16 per cent. by miscellaneous causes. "Falls" and cars caused nearly 66 per cent. of the fatal accidents inside, and it is a lamentable fact that perhaps half of these could have been avoided by ordinary precaution on the part of the victims. Of the 92 fatal accidents on the surface, 64, or nearly 70 per cent. were caused by cars and machinery. To carelessness on the part of the victims may be attributed at least one-half of these accidents.

The occupations of the 426 persons killed inside were as follows: miners and miners' laborers 312, or 73.24 per cent.; drivers and doorboys 58, or 13.61 per cent.; all other occupations 56, or 13.15 per cent. Of the 102,055 inside employes, 64,356, or about 63 per cent. were miners and miners' laborers, among which class over 73 per cent. of the fatal accidents occurred. For every 1,000 miners employed 5.49 lost their lives, and for every 1,000 miners' laborers employed 4 lost their lives. These figures indicate clearly that the occupation of the miner and his laborer is of an extra hazardous nature.

A comparison with the figures contained in the Annual Railway Report of the Secretary of Internal Affairs, shows that the percentage of accidents among anthracite mine employes is considerably greater than among the employes of the steam railways. For the year ending June 30, 1901, the railways of the State reported 335,865 employes and 987 fatal accidents; for the year ending June 30, 1902, 377,798 employes and 1,137 fatal accidents; for the year ending June 30, 1903, 419,581 employes and 1,323 fatal accidents. Taking the total number of employes for the three years as 1,133,244 and the total number of fatal accidents as 3,447, we find that for every 1,000 employes the percentage killed was 3.04, while the percentage among the mine employes was 4.16.

In my report for 1902 the following remarks appear, which were appropriate then and are equally so at the present time.

"During the past twenty years more than fifty per cent. of the accidents were caused by 'falls,' but there is no reason why the number from this cause should not be reduced by at least 50 per cent. If as much care were taken to guard against falls of coal, roof and sides, as is taken in regard to ventilation for the purpose of keeping the mines clear of what is generally called the deadly 'gas,' a stringent rule would be adopted against the more deadly 'falls.'"

In the last twenty years for every person killed by an explosion of gas, six persons have been killed by "falls," making the ratio six to one.

During the year 1902, 1,351 persons acted as fire bosses, whose duty it was to see every day that the mines were kept clear from the deadly "gas," when there was no person engaged to look after the men doing the actual mining of coal. The law provides that

"the mine foreman or his assistant shall visit and examine every working place in the mine at least one every alternate day, while the men of such place are or should be at work, and shall direct that each and every working place is properly secured by props or timber, and that safety in all respects is assured by directing that all loose coal or rock shall be pulled down or secured, and that no person shall be permitted to work in an unsafe place unless it be for the purpose of making it secure."

The law imposes many duties on the foreman, and the companies expect, and justly too, that as they pay him, his first duty is to safeguard their interests, especially in seeing that the coal is taken out. The safety of the men at the "working faces" is almost the last thing that is considered.

I do not desire to criticise the overworked official mine foreman because he does not comply with the requirements of the law. I know it is a physical impossibility for him to do so, and at the same time do his duty to his employer. It is my opinion, however, that the coal companies should engage a sufficient number of assistant foremen for the very responsible duty of examining the working places in the mines. These foremen should direct that every working place be examined every day and properly secured by props, timber or otherwise. They should also direct that all loose coal or rock be pulled down or secured, so that safety be assured so far as possible. They should also see that no person be permitted to work in an unsafe place except for the purpose of making it secure.

At the last session of the Legislature, Hon. D. J. Thomas, Senator from Schuylkill county, formerly a practical miner, foreman and superintendent, knowing of the lack of care and attention in the matter of safeguarding the lives and limbs of the persons actually engaged in the mining of coal, offered the following amendment to the law, which could have been made applicable to both the authracite and bituminous mines:

"In mines generating explosive gases, the mine foreman or his assistants shall make a careful examination every morning of all working places, and traveling roads, and all other places which might endanger the life and safety of the workmen; before the workmen shall enter the mine, and such examination shall be made with a safety lamp, and that within three hours at most before time for commencing work, and a workman shall not enter the mine or his working place until said mine, or part thereof, and working place are reported safe. Every report shall be recorded without delay in a book, which shall be kept in an office at the colliery for the purpose, and shall be signed forthwith by the person or persons making the examination. Said record book shall be supplied by the Department of Mines.

"And in all mines the mine foreman or his assistants shall make a careful examination each day of all the working places and

traveling roads, to see that the roof and sides are properly supported by timber or other material, and to see that the rules in regard to systematic propping are faithfully carried out. Any miner or other workman found violating these rules, or neglecting to comply with their provisions, shall be suspended. Reports of all examinations shall be recorded in a book, which shall be kept in an office at the colliery for that purpose, and shall be signed forthwith by the person or persons making the examination. It shall be the duty of the mine inspector to see that all such examinations are properly recorded and signed by the person or persons making such examinations. These record books shall be provided by the Department of Mines."

This amendment, if it had been adopted, would have gone a great way towards lessening the number of accidents from "falls," and I am of the opinion that if properly lived up to, at least half of the accidents from this cause could be avoided. So far as known, the coal companies made no opposition to this amendment, but considerable opposition was met with from some of the leaders of the mine workers, because of the provision that "any miner or other workman found violating these rules, or neglecting to comply with their provisions, shall be suspended."

In my opinion it is a more merciful act to "suspend a miner" for violation of the rules, than to allow him to lose his life through neglecting to comply with the law which has been enacted for his safety.

I hope that Senator Thomas, or some other equally expert miner, will take up this matter again, and that the leaders of the miners especially will not oppose its passage into a law.

In carrying out the intent of this amendment the immediate expense to the coal companies might be from a fourth to a third of a cent per ton for the coal mined, but this amount would be materially reduced by the less number of accidents. Every time an accident occurs there is a cessation of work and a certain demoralization of the employes in the immediate vicinity, and a consequent loss to the company. In the case of fatal accidents the loss sustained in this way is considerable, as frequently a whole section of a mine is demoralized at the time of the accident and many of the employes stop work to convey the victim to his home. When he is buried, the company suffers a still further loss by the closing down of the colliery for at least half a day to allow the employes to attend the funeral. It is impossible to state the actual loss to a company from the many fatal and non-fatal accidents that occur, but no doubt at least half of those resulting from "falls" could be avoided by the adoption of the plan suggested, and the company's ledger at the end of the year would show very little, if any, additional expense. Even if there should be an expense of a fourth of a cent per ton, I do not

believe that any company would object to the paying of that amount if by so doing human life could be saved and human suffering avoided.

Number of employes inside and outside the Anthracite mines; number of fatal accidents; number of fatal accidents per 1,000 employes; number of tons of coal mined per fatal accident inside, 1881 to 1903 inclusive

Years	Number of employes inside of mines	Number of fatal accidents inside	Number of lives lost inside per 1,000 employed	Production of coal in tons of 2.000 pounds for each life lost inside	Number of employes outside of mines	Number of fatal accidents outside	Number of lives lost outside per 1,000 employed	Number of lives lost inside and outside per 1,000 employed
1881, 1882, 1883, 1884, 1884, 1885, 1886, 1887, 1889, 1899, 1899, 1899, 1899, 1899, 1899, 1899, 1899, 1899, 1899, 1990, 1990, 1901, 1902, 1903,	45, 619 50, 764 66, 268 61, 922 62, 901 67, 716 78, 688 74, 178 73, 613 76, 569 81, 953 86, 387 87, 905 94, 978 95, 812 91, 171 92, 223 94, 140 98, 374 102, 055	234 250 274 290 290 290 270 317 339 322 361 388 368 430 389 369 369 372 372 372 372 372 372 373 474 474 475 476 476 476 476 476 476 476 476 476 476	- 5.13 4.93 4.87 4.68 4.61 3.69 4.03 4.35 4.40 4.85 4.40 4.19 3.98 4.53 3.98 4.42 4.42 4.43 4.53 4.44 4.53 4.49 4.19 4.53 4.40 4.19 4.53 4.40 4.19 4.19 4.19 4.19 4.19 4.19 4.19 4.19	144,594 138,285 135,666 127,507 129,456 161,662 154,045 147,313 138,009 133,406 141,689 126,189 126,189 126,186 141,246 143,198 144,246 144,246 145,773 156,186 157,773 156,059 166,689 166,689 176,699	30, 412 31, 436 35, 153 39, 151 37, 419 39, 114 43, 530 44, 530 46, 6739 48, 212 51, 682 52, 038 54, 031 55, 320 53, 745 48, 433 48, 212 51, 245 48, 433 48, 212 52, 038 54, 031 55, 320 53, 745 48, 433 48, 212 54, 2	39 41 40 46 42 42 43 46 46 47 75 55 56 57 78 68 78 77 72 51 72 53 72 55 59 92	1.28 1.30 1.40 1.75 1.75 1.12 1.10 1.18 1.08 1.18 1.18 1.19 1.18 1.30 1.52 1.24 1.30 1.52 1.24 1.30 1.52	3.59 3.54 3.53 3.28 3.31 2.71 2.97 2.98 3.32 3.32 3.15 3.47 3.20 3.34 2.83 2.83 2.83 3.44

<sup>\*</sup>This is the year of the big strike, when an average of only  $116\ \mathrm{days}$  was worked by the collieries.

Number of miners and miners' laborers employed in the Anthracite mines; number killed and ratio of each class killed per 1,000 employed; average number of days worked by breakers; average production per day worked by breakers, 1881 to 1903 inclusive

Years	Number of miners em-	Number of miners killed	Number of miners killed per 1,000 employed	Number of miners' laborers ers employed	Number of miners' laborers killed	Number of miners' labor- ers Eiled per L.co em- ployed	Average number of days worked by breakers	Average preduction per day worked by break- ers, gross tons
1881, 1882, 1883, 1884, 1885, 1886, 1886, 1887, 1889, 1890, 1891, 1891, 1892, 1893, 1894, 1895, 1898, 1898, 1898, 1898, 1898, 1898, 1899,	22, 809 22, 843 25, 319 27, 100 28, 305 25, 970 29, 558 31, 147 30, 51 41, 147 30, 779 32, 851 34, 553 34, 553 35, 771 36, 832 36, 822 36, 823 36, 823 36, 823	114 135 138 132 160 131 102 109 119 119 136 189 195 218 179 210 179 210 179 210 179 210 179 210 210 210 210 210 210 210 210 210 210	4,99 5,91 5,37 4,87 5,63 4,89 6,34 5,05 6,14 5,93 6,54 5,18 5,18 5,18 5,18 5,18 5,18 5,18 5,18	16, 726 15, 22) 16, 879 19, 606 20, 128 17, 668 17, 518 21, 952 19, 368 18, 620 19, 590 22, 110 22, 853 26, 355 26, 255 26, 413 27, 533	70 56 67 81 86 68 57 87 79 95 119 120 108 91 115 121 114 121 121 121 121 121	4.19 3.66 3.97 4.13 4.27 3.98 3.25 3.96 4.08 5.10 6.07 5.47 3.63 3.63 5.15 4.76 4.78 4.73 3.63 4.74 4.73 4.73 4.73 4.73 4.73 4.73 4.7	221 218 232 192 207 196 208 218 219 210 213 202 202 275 187 170 171 171 171 175 176 195 **116	136, 696 141, 593 149, 552 169, 530 173, 696 178, 544 191, 002 198, 049 190, 901 208, 039 225, 312 233, 562 260, 035 273, 823 282, 730 312, 219 301, 867 291, 007 313, 230 313, 330 318, 330

<sup>\*</sup>Small number of days worked due to strike. †This increase of over 10,000 tons per day was caused by washeries working during the strike, the time of which was not computed in the average days worked.

#### CARE OF INJURED MINERS

At intervals from 1881 to the present time, I have called the attention of the operators, mine workers and the general public, to the necessity of adopting some system of relief for injured miners and for the families of those who are killed and disabled. Reference has been made to the systems adopted by the Cross Creek Ceal Company, under the direction of the late E. B. Coxe, and the Lehigh Coal and Navigation Company, under the direction of W. D. Zehner. There may be other companies that are doing good work in this direction, and if so, I shall be glad to show in future reports the result of their efforts.

My remarks did not seem to have any effect until last year, when the subject was taken up by some of the leaders of the mine workers

and also by the leading newspapers. The Scranton Tribune in a recent issue opened a formal discussion with T. D. Nicholls, President of District No. 1, of the United Mine Workers of America, as follows:

"For many years various projects have been discussed having in view the relief of miners and laborers injured while following their daily work, and the support of the widows and orphans of those who have met their death in and about the mines. Notwithstanding that great minds have given the subject their attention, nothing definite has been accomplished, notwithstanding that employers have on many occasions evinced their willingness to co-operate in such a humane movement. This has probably been due to the fact that the question is both complicated and intricate, as is seen from the history of similar movements in this and the old world."

"There has been a revival of the discussion since the findings of the Anthracite Commission. Previous to that epoch in the history of the anthracite industry, there were differences between employer and employe, which required re-adjusting and which caused more or less irritation. Under such circumstances, neither side was in a favorable mood to discuss a system of permanent relief for miners. The exhaustive and far-reaching discussion of miners' grievances, before the Anthracite Commission, has accomplished wonders in removing old grievances and establishing better relations, and the natural sequence is the thought that something may now be accomplished in the way of organizing means of permanent relief for the great array of disabled miners and for the support of the widows and orphans."

"The discussion before the Anthracite Commission of the South Wales conciliation scheme, which formed the basis of the organization of the Anthracite Conciliation Board, has drawn attention to the North Wales Permanent Relief Society, which has been in operation for the past quarter of a century. There the employers and employes contribute to the fund in proportion, and about \$10 per month is given to disabled miners, \$5 per month to the widows, and \$2.50 per month to each orphan while under the age of fourteen years. The fund is managed by a board of directors composed equally of employers and employes. While a remarkable work of mercy has been accomplished by this fund in North Wales, many of the features would not be applicable to this region, but a number of improvements could be effected."

President Nicholls, of District No. 1, United Mine Workers of America, in an interview with a Scranton Tribune reporter, discussed the matter.

"Do you believe that a project for the organization of a permanent relief fund for the miners of the anthracite region would be feasible? he was asked.

"Yes," replied Mr. Nicholls, "an accident and death fund."

"Presuming that a State law was passed placing a tax of, say, one-half a cent on each ton of coal sold, such tax to be paid by the operators to the State, and repaid to the management of the relief

fund, would the miners, in your opinion, co-operate by paying into such fund a pro rata share to place the fund on a sound basis?" was the next question.

"It would be difficult," said Mr. Nicholls, "to secure complete cooperation between employers and employes, unless the law was mandatory, as there are some employers and employes who would refuse to contribute. My opinion is that there should be a general law passed by the State requiring all employers employing more than twenty-five persons, to pay certain sums during idleness caused by accidents received while at work, and for death, caused by accidents while at work. The weekly benefits should be sufficient to keep the average family in the necessities, and the death benefit should be sufficient to support the average family for at least a year, caring for all children under working age, left by a father killed at work. By the law being applicable to all employers in the same degree, the cost of operating could therefore be computed with this additional cost considered legitimate expense. Such a law would also tend to reduce accidents to a minimum, as the employers would have a strong motive for insisting on all life-protecting methods and appliances being used, and proper supervision by their hired representatives. This law would compel the general public (which would include the employers themselves) to be responsible for the poor unfortunates who are injured while doing public service. Those who consume the products and thereby profit by the labor of another, should be willing to support the persons and their families, who are injured while producing the same, and be glad they are more fortunate."

"What general or organized provision is there at present among those employed in connection with the anthracite industry, to help in cases of fatal accidents or injuries, as compared with Welsh relief fund?" asked the reporter.

"Many of the collieries have an accident and death benefit fund," explained Mr. Nicholls, "which is supported jointly by the company and the men. Membership in such funds is entirely voluntary and they therefore do not include all workers as members. There are also what are calley "keg funds." The sale of empty powder kegs to the powder company produces the main part of the revenue, although many members of such funds pay a stipulated amount monthly for their protection in case of accident or death."

I have given here verbatim what the Tribune published, hoping that it would have proper weight with all parties interested.

As Mine Inspector and Chief of the Department of Mines, I have written and plead in public and private with superintendents, operators and miners, endeavoring to show the great good that could be accomplished by having a general system adopted whereby the in-

jured, and the widows and orphans of those killed, and other persons dependent upon the unfortunate miners, could be cared for, and I am of the opinion that a system such as that adopted by the Lehigh Coal and Navigation Company could be utilized with some changes, to meet all requirements in our anthracite and bituminous counties. Possibly a general system should be adopted for the bituminous and anthracite regions, whereby the companies shall contribute one per cent. per ton and the employes one per cent. of their earnings, to be paid monthly to some person designated as treasurer, and upon the information obtainable from the inspectors and the Department of Mines, the fund could be paid to the proper persons. If each company would take hold of this matter, it would be much simpler, but if there is no general law passed, few of the companies, I think, would subscribe to the fund, and few employes would consent to have the one per cent. deducted from their earnings.

Therefore, in the interest of humanity, I would suggest that a law be passed taxing all employers of labor in and about the mines one cent per ton for all coal sent to market, and all employes inside and outside of the mines one per cent. per month on their net earnings. The amount of money that would accrue from this tax would be enough to care for the burial of the dead, to care for the children until they should reach the legal age, and also to care for the widows until re-married.

I reprint herewith briefly the rules of the Lansford Beneficial Fund, as organized by the Lehigh Coal and Navigation Company, in January, 1884. I also give a brief statement of its purposes and the results of its operations to December 31, 1903. At first the men working in the mines were assessed 1 per centum of their wages, not to exceed \$1.00 a menth, and the outside men were assessed one-half of one per centum of their wages. The company contributed one cent per ton on its production. In 1894 the fund had accumulated to such an extent that the contributions were cut down one-half, but this was found to be too much of a decrease as the fund soon diminished to a point where it failed to meet the demands made upon it. There is now a debit balance of \$9,057.49. This decided decrease in the fund makes apparent the necessity for increasing the contributions by at least one-half the present rates.

#### THE LANSFORD BENEFICIAL FUND

"This fund shall be created and maintained by the following contributions, to be made monthly:

"The Lehigh Coal and Navigation Company will pay into it one cent for every ton of coal produced at its mines. The inside workmen employed on its property will pay into it one per cent. of their earnings, and the outside workmen will pay into it one-half of one per cent.; but no one shall pay more than one dollar in any one month. \* \* All moneys which shall be paid into this fund shall be placed in charge of a Board of Trustees to be apopinted from time to time by the President of the Lehigh Coal and Navigation Company, and to be chosen by him, partly from the officers of the company and partly from business men of experience and good reputation in the mining region.

"A report of the receipts and expenditures of this fund shall be published by the Board of Trustees at least once in each year. \* \* The fund thus established is believed to be ample to meet all claims arising from accidents to the contributors, and if, as is hoped, there shall be more than is required under this plan, the benefits will be increased as from time to time the trustees may think prudent.

"The Lehigh Coal and Navigation Company, in making this contribution and establishing this fund, desires to relieve the suffering which the accidents cause among its workingmen, and to render unnecessary the collections which make a heavy tax on the benevolent; and also to promote the growth of kindly feeling which now exists between the company and the men engaged in its service."

"The fund out of which benefits are paid to disabled miners and to the widows and orphans of those killed in the service of the company, is derived from contributions from the employes who joined the association, and from the company.

"The benefits paid by this fund are as follows:

"In case of injury not resulting in death, one-half of the average earnings of six months preceding the accident are paid until the injured person is able to resume work or for a period not exceeding six months thereafter.

"In case of fatal accident, \$30.00 are paid for funeral expenses and the family of the deceased is paid for eighteen months, one-half of his monthly average earnings for six months preceding the accident.

"While it is optional with the employes of the company to become members of the association in point of fact, practically all of them are glad to contribute to the fund."

#### 1903.

Contributed by company, \$9	,628 45
Contributed by employes, 10	,160 71
	,450 00
Total contributions and receipts,	\$21,239 16
Benefits paid, \$25	
	,268 23
Total payments, \$26	5,369 34
	3,927 31 30,296 65
Debit balance, December 31, 1903,	\$9,057 49

#### LEGAL AGE OF BOY EMPLOYES

The anthracite mine law of 1870 made the miniumum legal age of boys employed outside the mines twelve years, and inside fourteen years. The legislative amendments of 1885, 1891 preserved the same minimum requirements. I am not familiar with the mining laws of Continental Europe, but in Great Britian the age limit is the same as in Pennsylvania.

A great deal of criticism has been indulged in regarding the employment of children in and about our coal mines, but it has been due largely to the fact that false statements are made in the certificates of age as presented by the parents or guardians of the children.

The law is emphatic in its requirement of properly attested certificates from children applying for employment, but unfortunately under the present system no protection is afforded in cases where the age is falsely represented. The inspectors may frequently have doubts as to the eligibility of the boys who are given employment, but as the certificates have been accepted by the mine foremen, they are without authority to take any action in the matter.

As children are now compelled to begin attendance at school at six years of age, they should, if continuously kept at their studies, be able at the age of twelve to read and write the English language, and 95 per centum of them should have a pretty clear comprehension of what they read. I think, however, that the minimum age for employment outside the mines ought to be advanced to thirteen years, to conform with the school law of the State. But the present minimum of fourteen years for inside employment need not be changed. All children cannot enter the higher professions; in fact, most of them must take up the manual occupations that are the basis and backbone of all our industries. They must be machinists, carpenters, miners, blacksmiths, drivers, laborers and so forth, and the common school advantages of the present day should sufficiently equip them at the age of fourteen to enter upon these occupations. This seems to be conceded in all occupations but that of the miner, and in his case it is urged that the entrance upon his life work should be delayed until he is sixteen. I do not agree with this view of the matter, and have therefore never approved of the amendment advancing the legal minimum limit to sixteen years. I know of many instances where boys of sixteen are earning men's wages inside the mines, and it seems to me a mistake to class them as children. This belief has deterred me from endeavoring to enforce the

provisions of the amendment; but I nevertheless instructed all of the inspectors, when the law went into effect, to demand of the companies employing boys that they require of every boy of doubtful age a certificate from parent or guardian showing him to be of legal employment age. The companies, especially in the anthracite region, willingly complied with the demand, but as before stated, while the certificates attested to the ages fourteen or sixteen, it was evident that many of the boys were under that age. To improve the condition I knew existed, I sent a circular letter to the inspectors for distribution among the mine officials. The letter read as follows:

"December 15, 1903.

"Dear Sir: You are hereby notified that on and after January 1, 1904, all boys who appear to be under the legal age shall be required to furnish affidavits, sworn to before a justice of the peace or other officer qualified to administer oaths, setting forth the fact that they have attained the age required by the mine law; that said affidavit shall be filed with the superintendent or mine foremen at the collieries, and the Mine Inspectors shall examine them on their visits of inspection.

"These certificates shall be filed in the mine offices, convenient for examination by the Inspectors.

"(Signed) "Very truly yours,
"(Signed) JAMES E.

JAMES E. RODERICK,

"Chief of Department of Mines."

This letter, especially in the bituminous region, brought down upon the Department a flood of interrogations from operators, lawyers and mine workers, as to my authority for making such a demand.

To test the constitutionality of the law, I instructed Inspector James Blick to bring suit against Frank Schulte, mine foreman of the Pittsburg Coal Company. The legal proceedings in the case are submitted herewith.

IN THE COURT OF QUARTER SESSIONS OF ALLEGHENY COUNTY, PENNSYLVANIA

Commonwealth
Vs.

No. 151 September Sessions, 1903.

Motion to Quash Indictment.

SHAFER, J.

The indictment charges the defendant, being a mine foreman, with violating section second of the act of May 13, 1903, by employing in a mine in the county of Allegheny under his charge and control, a boy under the age of sixteen years in work not permitted by that act. The defendant has moved to quash the indictment on the allegation that the act in question is unconstitutional and void.

The act in question is entitled "An act to amend article 9, section

1 of an act, entitled 'An act to provide for the health and safety of persons employed in and about the anthracite coal mines of Pennsylvania, and for the protection and preservation of property connected therewith,' approved June 2, 1891, also to amend section 17 of an act, entitled 'An act relating to Bituminous coal mines and providing for the lives, health, safety and welfare of persons employed therein,' approved June 30, 1885."

While it is true that anthracite mining and bituminous mining are, in a sense, two distinct subjects, and have been regulated by acts of Assembly such as those quoted in the title above mentioned applying only to the one and not to the other, yet there are species of a single genus and it is no doubt competent for the Legislature to enact laws applying to both of them. The title, therefore, cannot fairly be said for that reason to contain more than one subject. The Constitution, however, provides that no law shall be revived or amended by reference to its title only, but that so much of it as is revived and amended shall be re-enacted and published at length. It seems to us that the amendment of two distinct acts of Assembly, which refer to different subjects of legislation, in one act, even though they may be parts of a general subject, constitutes two subjects within the meaning of the Constitution, each subject being the amendment of a particular act so that it shall read in a particular way.

It is further claimed that the act of June 30, 1885, cited for amendment was repealed by the act of May 15, 1893, and was not, therefore, in force at the time of the passage of the act in question, but that article 17, section 1, of the act of May 15, 1893, regulates the subject of the employment of boys and women in coal mines.

The act of May 15, 1893, contains a repealing clause of all acts inconsistent therewith, and it seems to us plain that the act of 1893 was the law in force at the time of the passage of the act in question. The title of the act in question declares the intention of the Legislature to amend section 17 of the act of 1885. The body of the act provides that the first section of article 9 of the act of 1885, which is alleged in the act to read as therein set out, shall be amended. An inspection of the act of 1885 will show that it is not divided into articles at all; but there is therefore no section first of article 9 of the act and that section 9 of the act and section 17 of the act are both entirely different from the section set out to be amended, which corresponds with section 16 of the act of 1885. So that the title of the present act speaks of one section of the act of 1885, the body of the act speaks of another section and recites for amendment a still different section.

It seems to us therefore that the act of 1903 is void, for the reason that it is an attempt to amend two distinct acts of Assembly by one act, for the further reason that its title is misleading in that it declares to be the intention of the Legislature to amend a section of the act, which is not mentioned in the act itself, and further, because it is not competent for the Legislature to amend in effect the act of May 15, 1893, without reciting its provisions instead of reciting the provisions of an act on the same subject which was not in force.

The indictment is, therefore, quashed.

From the record.

Attest: FRANCIS X. BARR, Clerk.

Upon receipt of the decision of the court, I instructed Inspector James Blick to have the case appealed to a higher court, although convinced that the decision was a correct one. The letter relative to the enorcement of the amendment, so far as Allegheny county was concerned, was withdrawn, but until the matter is passed upon by a higher court, its enforcement will be insisted upon in other counties.

The rank and file of the anthracite miners are against the amendment, but say very little about it. The bituminous miners, however, are loud in their protests, and this Department has received many communications from the mine workers and their leaders in regard to its enforcement. I may say here that this amendment was prepared, endorsed and presented by the leaders of the Anthracie Mine Workers of America, but its scope was evidently not appreciated or understood by the leaders of the Bituminous Mine Workers of America until the Department commenced to enforce it. Personally, I have no fault to find with this law, but it no doubt is working a great hardship to many of the widows of mine workers who have been killed in this State. If the children of deceased miners, and they are legion, are not allowed to work in the mines until they are sixteen years of age, who is to care for them and for the younger members of the family and the widowed mother? Before such a law was passed, the State, counties or townships should have made ample provision to care for the widows and orphans until the orphans reached the legal employment age. The law can possibly be amended to make an exception of the children of widows who have no other support.

As I understand it, this amendment was prepared to give the rising generation more years of schooling, and thus better prepare them for citizenship. The purpose is entirely praiseworthy and in keeping with our American ideas of progress and enlightenment; but the requirement is so excessive that it works a hardship to many of the orphaned children and their mothers.

I am well aware that I tread on dangerous ground in expressing my opinion on this question, and perhaps lay myself open to the criticism of the advanced theorists, but I feel that I voice the sentiment of an overwhelming majority of the mine workers of the State when I recommend a further revision of the law to make the ages of boys thirteen and fourteen respectively, for outside and inside work at the mines. However, whether an amendment be made or not, there should be a heavy penalty attached to the violation of the law by parents, guardians or employers.

A further requirement should be that every boy after reaching the legal employment age should be compelled to prove that he can read and write the English language, unless he is of foreign birth and did

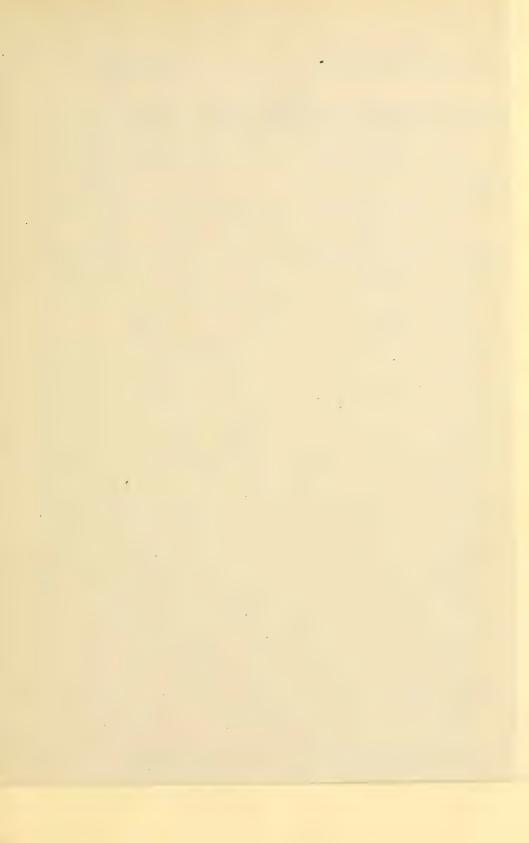
not come to this country until twelve years of age. Some one person in every inspection district should be held responsible for the enforcement of the law, and I recommend that each district inspector be the authority to receive the age certificates of all the children applying for employment. After satisfying himself as to the correctness of the certificates, he should test the applicants' ability to read and write, and then furnish them with additional certificates showing that they are legally qualified to work inside or outside the mines, as the case may be. No employer of labor should be allowed to hire any boy unless he possesses a certificate from the inspector. The inspector should also have authority, and it should be made part of his duty, to prosecute all violators of this law, and to enable him to do this a special appropriation should be made by the legislature.

With these additional requirements, it would be possible to eliminate child labor from the coal mines of Pennsylvania.

#### MINE INSPECTION

The inspections of the mines during the past year were conducted with systematic regularity, but with no better results, apparently, than in former years, although the increase in the number of inspectors, from eight to fifteen, made it possible to give the work closer attention. The benefits, however, that might have been derived from this provision were completely nullified by the absurd requirement of section 15 of article II, as amended, that "each inspector shall examine all the collieries in his district, including each working face, at least once every two months." It would be a physical impossibility to do this. It is doubtful, indeed if it could be done once in five months. This requirement defeats the very purpose of the act and reduces the inspector to a mere walking machine, with time only to note the most trival matters. The section of which this requirement is a part is the most arbitrary to be found in any mining law of this or any other country, and never should have been enacted. It entails duties upon the inspectors that they cannot perform, takes from them the right to use their own judgment in the conduct of their work, and has a decided tendency to lower the efficiency and thoroughness of the inspection. I have therefore been loath to compel them by judicial measures to meet its requirements. The section reads as follows:

"Each of the said inspectors shall reside in the district for which he is elected, and shall give his whole time and attention to the duties of his office. He shall examine all the collieries in his district



COMMONWEALTH OF PENNSYLVANIA.

ijames mines RECORD OF INSPECTION as per Section 15, of Article 2, Anthracite Mine Law as Amended June 8th, 1901.

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at least once every two months, as often in addition thereto as the necessities of the case or the condition of the mines require. He shall see that every necessary precaution is taken to secure the safety of the workmen and that the provisions of this act are observed and obeyed; and he shall personally visit each working face and see that the air-current is carried to the working faces and is of sufficient quantity or volume to thoroughly ventilate the places. He shall every three months make a report of the condition of each working face in each colliery, on a form to be furnished to the Inspectors by the Chief of the Bureau of Mines and Mining, designating the gangway in which the working is situated and the breast number of said working, and their condition shall be designated by the words good, fair or bad, as the circumstances may warrant; and the said report, or a duplicate, shall be placed in a weather and dust-proof case, with a glass front; said case to be furnished by the operator and placed in a conspicuous place at each mine opening, shaft, slope or drift, so that the workmen have easy access thereto. He shall certify in said report that the employes are hoisted to the surface of the ground or given access thereto according to law; he shall attend every inquest held by the coroner or his deputy upon the bodies of persons killed in or about the collieries in his district; he shall visit the scene of the accident for the purpose of making an examination into the particulars of the same, whenever loss of life or serious personal injury occurs, as elsewhere herein provided for, and make an annual report of his proceedings to the Secretary of Internal Affairs of the Commonwealth, at the close of every year, enumerating all the accidents in and about the collieries in his district, marking in tabular form those accidents causing death or serious personal injury, the condition of the workings of the said mines with regard to the safety of the workmen therein and the ventilation thereof, and the results generally shall be fully set forth; and such other duties as now are or hereafter may be required by law."

Besides the general inspections, the inspectors are in duty bound to visit the scene of every fatal and serious accident, and to attend every coroner's inquest. They are expected to make special inspections when complaint is made by the employes, and also to meet the mine foremen or superintendents in order to point out any neglect or violation of the law discovered during their visits of inspection. Their duties are varied and numerous, and require great physical exertion.

A form is given herewith that was prepared by the Department to comply with the section referred to, and filled in by one of the inspectors as required by law. By this it will be seen that to comply with the requirements the inspector must have considerable clerical ability, as well as a thorough, practical knowledge of his business, qualifications not always found in the same person. It took this inspector 9 days to make the inspection of the Woodward colliery, and no doubt another day in the office copying the desired information from his notebook onto this blank.

I claim that he could have made an inspection of this mine in 3 days that would have answered all practical and theoretical purposes. If so, he spent 6 days doing unnecessary work. With sixteen mine inspectors, the mines can be properly inspected four or five times a year, allowing about 2 days for each inspection.

I hope the next legislature will amend or repeal this obnoxious section. In fact, article H should be amended or repealed in its entirety. If it is not amended or repealed, the number of inspectors should be increased from sixteen to at least thirty-two, if a compliance with its requirements is to be expected. If the legislature does nothing in the way of affording relief, it will be necessary for this Department to take the matter into court for a satisfactory solution of the difficulty.

#### ELECTION OF INSPECTORS

Remarks on Article II of the Act of June 8, 1901

The first general anthracite mine law of Pennsylvania was enacted by the Legislature in 1870. In 1885 it was revised in accordance with the recommendations of a Commission consisting of six miners, three operators and six inspectors, appointed by the Governor. It was further revised in 1891 on the recommendation of a Commission of eight miners, three operators, two mining engineers and two inspectors, appointed by the Governor; and in 1901 article H of the act of 1891 was further amended. The act of 1885 was much more satisfactory than the act of 1870 or the act of 1891 or the amendment of 1901, as its provisions were fair to the miners, operators and inspectors.

During the years 1889 and 1890 considerable dissatisfaction was manifested regarding the inspectors, especially in Schuylkill county, and this feeling was intensified against one of them who, from mistaken judgment, committed an act that, while not a violation of the law, was repugnant to the miners. It was an act entirely outside of his duties as inspector. Had any complaint been made to this Department regarding this inspector, or any of the other inspectors, it would have received immediate attention and the matter would have been thoroughly investigated. I did, on account of the persistant rumors regarding some of the inspectors, make careful inquiry to ascertain the causes of complaint, but found nothing to indicate that any of them had neglected their duties. This antagonistic feeling against the inspectors was encouraged and kept

alive to such an extent by a few interested persons, that the miners finally assembled in convention and passed resolutions calling upon the legislature to amend the mining law so that the anthracite inspectors could be elected by the people. They believed that this would do away with all objectionable inspectors and remove all causes of complaint, and that it would also open an avenue for ambitious miners to become inspectors. The fact is, however, that the office of inspector has always been open to all miners qualified to fill it; but in all the years from 1870 to 1903 only one miner passed a successful examination before an examining board in the anthracite region. (The word "miner" as used here, means a man actually employed at cutting coal.) The reason for this is found in the fact that the operators have always advanced the most intelligent miners to be foremen and fire bosses, and many of them have become superintendents and general managers of large corporations. One of them has recently attained the presidency of one of the most prominent coal companies. It is from this class of miners who were foremen or superintendents, that the anthracite inspectors have generally been selected, after a rigid competitive examination before a board composed of three miners and two mining engineers. With but one or two exceptions, the anthracite inspectors from 1870 to 1900 have been men of good moral character and practically and theoretically proficient. All the anthracite laws have favored the miners in the formation of examining boards, as they have always had three-fifths of the membership of each board. They have therefore been able to control the actions of the boards, and if at any time a man was chosen for the office of inspector who was not thoroughly 'qualified, the responsibility can be placed upon the miners.

In compliance with the demands of the miners, the Legislature in 1901 amended Article II of the law of 1891, providing, that after a certain date, all inspectors should be elected by the people under the general election law of the State, after first having passed an examination and answered 90 per centum of the questions propounded. The election of mine inspectors by the people is unheard of in any other state of the Union, except Kansas, or in any other country of the world, so far as I know. It is a most pernicious practice, as it brings the applicant for an office created for the preservation of life and property, into the vortex of political intrigue, and I sincerely hope the time will soon come when both the miners and operators will demand the repeal of this law. If, however, the election of inspectors is to continue, they should, at least, be elected by the miners and operators, who are the people directly interested in the office. More than this, the miners and operators of each district should vote for their own inspector. For instance, the Fifth and Ninth districts of Luzerne county are about 60 miles apart, and

the residents and miners are nearly all strangers to one another. Why should the voters of the Ninth district vote for the inspector of the Fifth, when the majority of the miners in the former district are ignorant of the qualifications necessary in the inspector of the Fifth? The reasons are equally good why the voters of the Fifth district should not vote for the inspector of the Ninth. It may be presumed that the inspector of the Ninth district has satisfied the miners and operators of his district, and if so, why should the voters of the Fifth district have a right to vote against him and possibly elect his opponent, regardless of the wishes of the people of his district?

If the election of inspectors can in any way be justified, it still remains a fact that the present method is unfair to all persons whose interests are concerned. Although Article II was amended in 1901, through a defect or an omission in its provisions only one election of inspectors has been held up to the present time. That election, however, indicated clearly how future elections would be conducted. The candidates for election in 1902 traversed the counties and used the same methods to obtain votes that were used by the other aspirants to political office. In large counties like Luzerne, Lackawanna and Schuylkill, they spent the best part of two months canvassing for the election, and if they had held the office at the time, it is unnecessary to say that the work of inspection would have been utterly neglected during that period. Can the State afford to pay wages to inspectors while they are electioneering, and consequently neglecting their duties? How will the miners regard it? The method is unquestionably opposed to the best interests of the State, the miners and the operators. The voters of the cities of Scranton, Wilkes-Barre and Pottsville, if they choose to do so, can decide who the inspectors shall be in Lackawanna, Luzerne and Schuylkill counties, while possibly not more than 20 per centum of them are mine workers. Again, why should the large farming districts of these counties have a vote as to who shall inspect the mines? The voters in both these instances are without interest in the matter. Why should the court of Schuvlkill county be empowered to appoint a board to examine applicants for mine inspector in Northumberland, Columbia and Dauphin counties (Article II, Section 3) when, if a vacancy occurs in Northumberland county, it can be filled only by the court of that county (Article II, Section 13)?

Great dissatisfaction necessarily exists with this law, particularly among the inspectors, and seven of the most competent ones (the equals of any in the world) have resigned from their positions since 1902. Under the old law, only two resigned from 1870 to 1902, and they did so to accept very lucrative positions.

The evil effects of the election of inspectors may reach even to the selection of mine foremen and fire bosses. The inspector is an exofficio member of the examining board, and there is reason to fear that in many cases a poorly qualified candidate who possesses some political influence may be treated with leniency not only discreditable to the board but inimical to the interests of the miners and operators. Incompetency in the office of mine foreman or fire boss is a menace to the lives of the miners and the property of the operators. Upon the vigilance, care and efficiency of these officers, depends largely the welfare of the mining interests, and I note with regret that during the past year certificates of qualification have been granted to men regarding whose incompetency there can be but little doubt. I hope the miners and operators will seriously consider my remarks upon this question, and make a joint effort to have the next Legislature repeal the amendment to Article II.

The system formerly in vogue in Pennsylvania of selecting inspectors by a competitive examination, was the best ever devised. In other states and in foreign countries, the appointments are made by the Governors or others in authority, without any test of qualifications. In some states, the office of inspector is considered a political one and a change in the party admiristration generally causes a change in the inspectors. Any other system, however, is preferable to our present one, which we deem the worst extant, and if we are not to return to the old one let us do as the other states do, and give the Governor power of appointment, even if it be without the requirement of qualification. In this connection I desire to say that the bituminous law of this state, in this respect, is entirely satisfactory. It provides that competitive examinations be held every four years by a board of five persons, appointed by the Governor, three of whom shall be miners. The board reports to the Governor the applicants who have answered 90 per centum of the questions, and he commissions as many inspectors as may be needed, from those who have received the highest percentage. If the number of successful applicants is greater than the number of existing vacancies, the names are placed on a reserve list, and when vacancies occur the Governor appoints the applicants having the highest percentage. This method could be adopted for the anthracite region.

Another injustice resulting from the amendment to Article II is the unequal distribution of the work of the inspectors, some of them having three times as much to do as others. For instance, the unfairness of including 29 collieries in the district of the inspector of Northumberland county, and only 7 collieries in the district of the inspector of Carbon county, will be apparent to everybody. The former district in 1903 employed 14,580 persons in and

about the mines, and produced 4,927,304 tons of coal; the latter district employed 4,051 persons, and produced 1,919,662 tons. Columbia county was also made a separate district by this amendment, although it has fewer mines even than Carbon county. To the Columbia district Dauphin county has been added, but the combined area is hardly one-third as large as the Northumberland district. Under the law, the Chief of the Department of Mines has no authority to send the inspector of Columbia county to inspect the mines of Dauphin county. The inspector of Columbia county is aware of this fact, but he does the work as a matter of courtesy. He would be within his rights if he refused to do it, as the law prohibits his acting in any other county than the one in which he was elected. The operators of Dauphin county might also be within their rights if they refused to have him inspect their mines.

I have endeavored to show some of the defects of the amendment in question, and in order that they might be remedied as quickly as possible, I respectfully suggest that the next session of the Legislature repeal it, and empower the Chief of the Department of Mines to make an equitable division of the work among the inspectors, without regard to county lines. I also suggest that the Legislature empower the Governor to appoint a commission to revise the mining laws of the State. From the present statutes, complex and intricate as they are, a law could be framed that might meet all the requirements of the anthracite and bituminous regions. The opinion used to prevail that the laws governing the bituminous mining operations need not be as stringent as those governing the anthracite region. Very few bituminous mines were thought dangerous, even as late as 1893. As a matter of fact, however, there is much more danger of serious catastrophies in the bituminous mines, than in the anthracite. There are bituminous mines to-day in which the carelessness of one man might result in the destruction of hundreds of lives. My observation leads me to think that one good law, stringent but just, would best meet the interests of all concerned. The commission might be composed of two miners. one operator and one mining engineer from the bituminous region, and two miners, one operatior and one mining engineer from the anthracite region, with one person to represent the Governor, and who shall act as chairman of the commission. The latter member should have practical and theoretical knowledge of the workings and ventilation of coal mines, but should have no financial interest in mining. The commission should have power to engage an expert constitutional lawyer to decide all questions of constitutionality, and an expert stenographer to make a complete record of the proceedings of the commission to the Legislature in 1907. The Legislature should then, without unnecessary delay, enact the law as recommended by the commission, and all amendments offered should

be voted down, as the Legislature is not competent to amend mine laws, as not ten per cent. of the members are familiar with the needs of the mining industry.

#### EXAMINATION OF FIRE BOSSES

The provisions of the anthracite mine laws regarding certificates of qualification for fire bosses, have for years been a bone of contention, especially among the practical men who had not received the proper early training or had not, in later years, made the effort to stand the test of a written examination.

In some districts very slight, if any, test was made of the knowledge and experience of the fire bosses. I therefore issued, through the inspectors of the different districts, a circular letter notifying the persons in interest that all fire bosses would be required to qualify as issistant mine foremen.

The letter created a furor among the fire bosses and their friends, and the Chief of the Department was charged by some of them with overstepping his authority. The result, however, was that the fire bosses took the examination, and all those who were qualified received certificates as assistant mine foremen.

The circular read as follows:

To Operators, Superintendents and Mine Foremen:

Owing to a misunderstanding among the Inspectors, there has been no uniform system of issuing certificates to fire bosses in the anthracite districts.

Hereafter all fire bosses in the Anthracite coal mines will be required to qualify as assistant mine foremen, as per section 4, article 8, of the Anthracite mine law, approved the second day of June, 1891, which reads as follows:

"Certificates of qualification to mine foremen and assistant mine foremen shall be granted by the Secretary of Internal Affairs to every applicant who may be reported by the examiners as heretofore provided, as having passed a satisfactory examination, and as having given satisfactory evidence of at least five years' practical experience as a miner, and of good conduct, capability and sobriety;"

And also as per section 7 of an act, entitled "An act to establish a Department of Mines in Pennsylvania," approved the fourteenth day of April, 1903, which reads as follows:

"Certificates of qualification to mine foremen and assistant mine foremen in the Anthracite mines shall be granted by the Chief of the Department of Mines to each applicant who has passed a successful examination. Before the certificates aforesaid shall be granted, each applicant for the same shall pay the sum of three dollars to the Chief of the Department of Mines." All fire bosses who are now acting without having complied with the foregoing sections, are requested to appear before the Inspectors of their respective districts, at the time and place designated by the Inspector, and qualify themselves as required by the provisions of the law.

History of the Case of the Commonwealth vs. The Wilkes-Barre and Scranton Coal and Iron Company.

On the 17th of June, 1903, the secretary of the board of health of the city of Wilkes-Barre, called the attention of this Department to an alleged violation of the law on the part of the Wilkes-Barre and Scranton Coal Company in rebuilding a breaker on the site of an old breaker of the Hillman Vein Coal Company. The inspector of the district was directed by this Department to look into the matter at once, and it was supposed that he would do so. In a short time, however, the Department received another communication from the secretary of the board of health, making further complaint, and the Chief at once went to Wilkes-Barre to interview the inspector, being thoroughly convinced that the Wilkes-Barre and Scranton Coal Company (the Hillman Vein Coal Company having ceased to exist after 1900) had no legal right to rebuild (not repair) a breaker on the site where a breaker had been erected in 1882 before the act of June 2, 1891, went into effect. More than this, the erection of the breaker as contemplated would, it was believed, prove a menace to the lives of the people employed in the mines, as the Hillman Vein mine was one of the most gaseous in the Wyoming Valley. In the event of a fire in the new breaker, the head-house and breaker being connected, the loss of life that would inevitably result to the hundreds of people entombed in the mine beneath, would be appalling.

The learned judge possibly may be correct in declaring that the company had the right, under the law, to rebuild this breaker, but in view of the disaster that may ultimately result from this interpretation of the law, it is suggested that it would be wise to have the act of 1891 amended. On the question of the safety of employes, the mine law should be so plain that it will admit of but one interpretation.

The proceedings in this important case are published herewith.

BILL IN EQUITY-FILED SEPTEMBER 2, 1903

To the within named defendant, Wilkes-Barre and Scranton Coal and Iron Company:

You are hereby notified and required within fifteen days after the service hereof on you, to cause an appearance to be entered for you in the court of common pleas of Luzerne county to the within Bill of Complaint of the within named Commonwealth of Pennsylvania et al., and to observe what the court shall direct. You are

also notified that if you fail to comply with the above directions by not entering an appearance in the Prothonotary's Office within fifteen days, and not filing your answer within thirty days, you will be liable to have the bill taken pro confesso, and a decree made against you in your absence.

Witness our hands at Wilkes-Barre, Pa., this 15th day of July, 1903.

> B. R. JONES, Attorney for Plaintiff.

## IN THE COURT OF COMMON PLEAS OF LUZERNE COUNTY

Sitting in Equity

The Commonwealth of Pennsylvania upon the application of Edward E. Reynolds, Inspector of Mines of the Seventh Sub-Division of the First Anthracite Coal Inspection District of Pennsylvania, acting in behalf of the said Commonwealth-Plaintiff.

The Wilkes-Barre and Scranton Coal and Iron Company-Defendant.

To the Honorable, the Judges of said Court:

Your orator complains and says:

First. That he is the mine inspector of the Seventh Sub-Division of the First Anthracite Coal Inspection District of Pennsylvania, embracing that portion of the Wyoming coal field lying east of the Susquehanna river and extending from the Eastern boundary line of Wilkes-Barre city to western boundary line of Newport township, excluding Buttonwood and Wanamie collieries.

Second. That as such inspector it is part of his duty to see that every necessary precaution is taken to secure the safety of the workmen employed in the mines within his district, and that the provisions of the mine law are observed and obeyed.

Third. That the within named defendant is a corporation duly organized under the laws of this Commonwealth for the purpose of mining and preparation of anthracite coal for market within the limits of the said Anthracite Coal Inspection District aforesaid.

Fourth. That the said defendant for the purpose of mining and preparation of coal is erecting a new frame breaker, shaft tower and engine house (inflammable structures) and other buildings necessary to be used for the preparation, storage, and hoisting of coal.

Fifth. That the said new breaker, shaft tower and other buildings are being erected on a plot of ground adjoining Pennsylvania avenue in the Sixteenth ward of the City of Wilkes-Barre on the property formerly known as "The Hillman Vein Coal Company Land."

Sixth. That said new breaker, shaft tower, and other buildings, if defendant is permitted to erect the same, will be within two hundred feet of the mouth of the shaft, which said shaft connects the surface of the underground workings of the mines of the defendant and up which shaft from the mines aforesaid the defendant intends to hoist coal when the new breaker aforesaid is completed.

Seventh. That the erection of the said new breaker, shaft tower, and other buildings in the manner aforesaid is contrary to law, namely to the fifth section of article fourth of the act of Assembly approved the second day of June, 1891, and entitled "An act to provide for the health and safety of persons employed in and about the anthracite coal mines of Pennsylvania and for the protection and preservation of property connected therewith," and the erection of said breaker, shaft tower and other buildings directly over the mouth of the shaft as contemplated will be dangerous and hazardous to the health and safety of persons employed in said mines, and will also work irreparable injury to your orator.

Your orator would therefore respectfully pray for relief as follows:

First. For an injunction, first preliminary and afterwards upon final hearing perpetual, against the said defendant, her agents, superintendents, servants, contractors, and employes, restraining them or any of them from erecting a breaker or other inflammable structure, for the preparation and storage of coal within two hundred feet of said shaft belonging to said defendant and located in the Sixteenth ward of the City of Wilkes-Barre, Luzerne county.

Second. For such other and general relief as may seem proper to your Honors in the premises.

## LUZERNE COUNTY, ss:

Edward E. Reynolds, the mine inspector of the First Anthracite Coal District above named, being duly sworn doth depose and say that the facts set forth and contained in the foregoing bill are just and true to his personal knowledge.

Sworn and subscribed before me, this day of July, A. D. 1903.

EDWARD E. REYNOLDS.

## OPINION OF COURT

## ON MOTION TO CONTINUE PRELIMINARY INJUNCTION

The depositions establish the following

## Facts

The original breaker of the Hillman Vein Coal Company was built in 1882.

It was erected less than two hundred feet from the shaft through which the coal which was put through it was brought to the surface.

The breaker and shaft so located with reference to each other were used from 1882 until August, 1900.

In the year 1902, the stock of the Hillman Vein Coal Company was bought by certain individuals, and shortly afterwards the defendant corporation was chartered, with said individuals and many others as stockholders.

The organization of the Hillman Vein Coal Company is still kept up.

None of the property of the Hillman Vein Coal Company has been transferred to the defendant corporation.

In the latter part of the year 1902, Robert Ireland, of the firm of Ireland and Pettebone, architects, saw a newspaper item in which it was stated that the defendant company was about to resume mining operations at the old Hillman vein colliery.

With a view of getting the job of preparing plans for remodeling the old breaker, he, of his own accord, examined it, and made a sketch plan, which he submitted to Mr. McCaskie, who was the man who had negotiated the purchase of the Hillman vein stock, and was an attorney at law, a stockholder of the Hillman Vein Coal Company, one of its directors, a member of its executive committee, and was also a stockholder of the defendant company.

With these plans McCaskie and Ireland met at the old breaker sometime before Christmas, 1902, and in that way procured information from which the plans were finished. They bear date January 17, 1902, and about two months after that date were accepted by McCaskie, and the work which has been since done has been in accordance with those plans.

Before any actual work was done Mr. McCaskie and Mr. Kearney, also a stockholder and director and the other member of the executive committee of the Hillman Vein Coal Company, and vice president of the defendant company, called in the mine inspector of this district, and McCaskie went upon the ground with him, and submitted the plans to him, and he examined into the matter and said that it was all right and that they should go ahead.

He did this after legal advice had been given him.

Thereupon McCaskie and Kearney, or the Hillman Vein Coal Company, or the defendant company—it does not matter which, for the purposes of this motion—went ahead with the work.

The mine inspector was there at least once during the progress of the work.

Nobody did anything to mislead the mine inspector.

McCaskie went over the matter with the mine inspector, so as to be assured that he was within the law, and showed him the plans, and went on the ground with him, and told him that if the timbers were rotten so as not to bear what was to put in, they would probably replace them with new timbers, and the mine inspector approved the proposed action.

On the faith of this approval McCaskie and his associates, whoever they are, proceeded in conformity with the plans and ideas so submitted, and expended nearly fifty thousand dollars on the building before this injunction was applied for.

The building which is there now is of new materials, because the old timbers were found rotten and insufficient to support the new machinery which is intended to be used.

It is essentially, however, upon the lines of the old breaker, and upon the old foundations.

## LAW

The plaintiff is estopped, and the preliminary injunction must be dissolved.

### GENERAL DISCUSSION

The act of June 2, 1891, P. L. 185, following substantially the language of the act of June 30, 1885, P. L. 226, declared, "that from and after the passage of this act, \* \* \* no 'breaker' shall be erected within two hundred feet of any such opening. \* \* \* Provided, That this section shall not apply to breakers that are now erected."

Having regard for the old law, the mischief and the remedy, there is great force in the argument that if by fire or the elements a breaker within the proviso of the act shall be destroyed, it may not be re-built, even upon the old foundation walls, but then comes within the prohibition of the act.

There is equal force in the argument that if not actually destroyed, such a breaker, arriving at such a state of delapidation as puts it beyond repairs, and requires a new building, also comes within the prohibition of the statute.

The analogy of cases arising upon ordinances prohibiting the erection of frame or wooden buildings within prescribed fire limits, and holding that such buildings may not be rebuilt after having been destroyed by fire or the elements, makes strongly for a like construction of the act of 1891.

So, too, in determining what shall constitute an erection of a building, as distinguished from repairs, the cases arising upon mechanics' liens seem to be applicable, even upon the admission that the statute ought to receive a strict construction.

On the other hand, there is force in the argument that such breakers as are within the proviso of the act of 1891 are in the same situation as if the act had never been passed.

That as to them, therefore, by the express terms of the statute there is no prohibition, and what might have been done concerning them before the act of 1885, may still be done.

This latter argument has received the assent of two judges of the common pleas—Judge Hand, in Commonwealth vs. Smith, 4 C. P. R. 1, and Judge Smith, in Commonwealth vs. Vipond, 14 C. C. R. 357 (1893).

In addition to this, the Attorney General, at the request of the Chief of the Mining Bureau, has given the act of 1891 a like interpretation.

See Coal Company breaker, 8 D. Reps. 124 (1899).

It is safe to say, therefore, that the complainant's right to prevail, is doubtful in law, and that alone would prevent a continuance of this injunction, which cannot result otherwise than in great pecuniary loss to the defendant, since it ties up the operations of a mining property of considerable extent.

City of Philadelphia's Appeal, 78 Pa. p. 33.

I put the decision, however, squarely upon the ground that the complainant is estopped by the conduct of the Mine Inspector.

If it were an individual who was asking for the continuance of the injunction, and it appeared that he had, with full knowledge and

information, encouraged the expenditure of nearly fifty thousand dollars by the defendant, before asserting that defendant's conduct was unlawful, and that too in a matter in which it was his special duty to know that such conduct was unlawful and to speak out, no one could doubt that he would be estopped.

The same law applies to the Commonwealth when she is party to an action.

Commonwealth vs. Smith, 2 Clark 120.

Commonwealth vs. Phila., &c., Turnpike Co., 153 Pa. 47.

The statute makes it the duty of the Mine Inspector to "examine all the collieries in his district at least every two months (and), as often in addition thereto as the necessities of the case or the condition of the mine require. He shall see that every necessary precaution is taken to secure the safety of the workmen and that the provisions of this act are observed and obeyed," etc.

Act of 1901, June 8, P. L. 543.

He is designated as the person upon whose application, in behalf of the Commonwealth, injunction shall be issued prohibiting the working of any mine or colliery \* \* \* in contravention of the provisions of this act.

Act of 1891, June 2, P. L. 204.

He is therefore the Commonwealth's officer or agent charged with the special duty of investigating and knowing if this breaker was being erected in contravention of the act of 1891, and if so, designated as the person who in behalf of the Commonwealth should proceed to enjoin it.

He determined in the beginning, after investigation, that the action of those engaged in repairing or rebuilding was not in contravention of the statute.

I am not prepared to say that he was wrong in so deciding, but whether right or wrong, the parties having gone ahead, and expended large sums of money, upon the faith of his consent, and without any subsequent dissent on his part, and having done this with full knowledge on his part, not hurriedly or covertly, but openly and during the greater part of a year, it would seem to me that the Court is now asked to do what the Legislatures of 1885 and 1891, recognizing as I do, all the dangers attending such an operation, refused to do, namely, to require the destruction or abandonment of a breaker already erected.

It is too late.

If the defendant had gone on in direct and unmistakable violation of the statute law, perhaps the case might be different, as for example, if the act of 1891 clearly and expressly forbade the rebuilding or extensive repairing of an old breaker on the original site, but where its legal right to do what it has done is doubtful, and was doubtful at the inception of the work, and during its progress, and it has gone upon the faith of a resolution of that doubt in its favor by the officer of the State having authority in the premises, and expended large sums of money, in good faith relying upon that decision, equity will refuse its aid, even to the State.

Adapting the language of the chancellor in Attorney General vs. The Delaware, &c., Railway Co., 27 N. J. Eq. p. 1, "The work has been from its commencement, a matter of public notoriety, and yet no action has been taken on the part of the State authorities, nor even any warning offered by them against the work. The defendants

have been permitted to make their immense expenditure upon their enterprise in the confidence of their convictions that they possessed all requisite legislative authority without even a word of protest or remonstrance"—indeed with the express sanction and encouragement of the State, speaking through its duly authorized official. "Under such circumstances, equity will refuse its aid, even to the State."

Quoted with approval in

Commonwealth vs. Phila., &c., Turnpike Co., 153, Pa. 55.

Now, October 27, 1903, this cause came on to be heard, and was argued by counsel, and thereupon, upon consideration thereof, it is ordered, adjudged and decreed as follows, viz., that the preliminary injunction heretofore granted on the 15th day of July, 1903, be and the same is hereby dissolved.

## DEPARTMENT OF MINES

The Bureau of Mines was created by the act of July 15, 1897, as a part of the Department of Internal Affairs. The act provided for a Chief of the Bureau, one clerk and a messenger, and lodged with the Governor the power to appoint the Chief. Governor Hastings named Robert Brownlee as Chief, and the Secretary of Internal Affairs named the clerk and messenger. At the time the Bureau of Mines was established the number of inspectors was 18, of which 8 were in the anthracite region and 10 in the bituminous region. As the Bureau was under the direct supervision of the Secretary of Internal Affairs, it was apparent to him at once that the clerical force provided was inadequate to perform the work, and he therefore detailed an additional clerk and a stenographer, increasing the force to five persons. But this force was not sufficient, and when I was appointed Chief of the Bureau by Governor Stone, on May 15, 1899, I instituted night work in the office. It was necessary to do this, particularly in the months of January, February, March and April, when the reports from the inspectors were coming in and the compilation of the annual report of the Bureau was in progress. The work was made still heavier in 1901 by the appointment of two additional inspectors in the bituminous region.

On the 14th of April, 1903, the act was approved creating the Department of Mines, and on the same day Governor Pennypacker appointed the present incumbent Chief of the new department. The act also provided for an assistant, two clerks, a stenographer and a messenger, a total of six persons, only one more than was employed in the Bureau.

On January 1, 1903, the act increasing the number of anthracite inspectors from eight to sixteen became operative, and under the provisions of section 5, article 10, of the act of May 15, 1893, the number of bituminous inspectors was also increased from ten to fifteen, raising the total number from eighteen to thirty-one, an increase of 72 per centum since the establishment of the Bureau.

In addition to this, the act of 1903, creating the Department of Mines, provided that the boards to examine applicants for the position of mine inspector, mine foreman, assistant mine foreman and miner, in the anthracite region, and first and second grade mine foremen, in the bituminous region, shall file all examination papers, including questions, answers and tally sheets, in the Department.

The act also provided that the Chief of the Department shall issue certificates of qualification to the mine foremen and assistant mine foremen in the anthracite region, and to the first and second grade mine foremen in the bituminous region, who are reported as having passed a successful examination. This work was formerly done by the Secretary of Internal Affairs, the Secretary of the Commonwealth, and the bituminous inspectors. The Miners' Examining Boards, however, were never before required to report their work to any of the State Departments.

The additional work, as referred to, with the increase in the number of inspectors, has overwhelmed the Department to such an extent that it has been almost impossible to keep abreast, notwithstanding the hours of the evening have constantly been devoted to work. It is apparent, therefore, that if the Department of Mines is to render the valuable service for which it was created, it will be necessary for the law to provide additional clerical force. I therefore recommend that section 9 of the act of April 14, 1903, be amended to read as follows:

"The Chief of the Department of Mines is hereby empowered to name a Deputy, four clerks, one messenger and one stenographer."

I recommend a Deputy, as it is necessary to have a person in authority that can decide important matters in the absence of the Chief of the Department, who is obliged to spend much time in investigating the complaints made from different parts of the State, and in visiting and consulting with the inspectors of the 31 districts.

In this connection it is proper to refer to the requirements of the Department in the way of accommodations in the new capitol building. The floor space required will be at least 3,800 square feet, to be divided into seven apartments for the Chief, Deputy, stenographer, clerks, messenger and exhibit room. The plan of the rooms and the details of their arrangement need not be mentioned here.

Summary of the Work of the Department (formerly Bureau) of Mines

Years	Letters written, copied and indexed	Letters received, docketed and filed	Blanks sent to mine inspectors	Letter heads and envelopes sent to mine inspectors	Rules, general and special, sent to bituminous mine inspectors	Mine foremen's record books sent to bituminous mine inspectors, 300 pages each	Fire-bosses' daily record books sent to bituminous mine inspectors, 230 pages each	Annual reports of the Bureau of Mines, shipped from office	English mine laws in pamphlet form sent to mine inspectors	Monthly narrative reports sent to mine inspectors, 31 pages each	Books for recording accidents sent to mine inspectors, 400 pages each
1898, 1899, 1900, 1901, 1901, 1902, 1903,	922 697 1,854 1,465 1,733 2,901	1,216 972 1,342 1,690 1,924 2,328	30,570 42,394 76,428 67,408 51,806 89,050	7,200 26,188 26,750 23,200 21,750 93,000	500 2,012 2,165 390 4,830 2,080	275 279 440 30 618 173	200 15 378 90	522 1,830 1,735 2,303 1,987 4,052	1,358 11,250	171 455 517 475	18 17 17 17
Year <b>s</b>	Reports of accidents received, copied and filed	Reports of inspections received, copied and filed	Daily reports of inspectors, showing duties performed and expenses incurred, copied and filed	Vouchers for incidental and other expenses compared, and delivered to Auditor General	Anthracite mine laws translated into foreign languages and distributed	Bituminous mine laws translated into foreign languages and distributed	Books of mine foremen's and assistant to mine foremen's certificates, 300 pages each, sent to mine inspectors	English mine laws in pamphlet form distributed	Mine inspectors' annual reports received, corrected and compiled for publication	Certificates of qualification issued to mine foremen and assistant mine foremen in the anthracite re- gion after being recorded	Certificates of qualification issued to mine foremen of first grade and mine foremen of second grade in the bituminous region after being recorded
1898, 1899, 1900, 1901, 1901, 1902, 1903,	2,235 2,350 2,719 2,211 3,293	3,846 3,318 3,486 2,996 5,312	5,416 5,627 6,024 6,243 9,360	576 644 656 926 1,640	57,250 22,325	57,000	60	38,000	18 18 18 20 20 30	127 181 70 206 235 690	768

# ABSTRACT FROM REPORT—ANTHRACITE REGION

Number of tons of coal mined, shipped, used at collieries, sold to local trade and used by employes; number of days worked, number of persons employed, number killed and injured, amount of powder and dynamite used, etc.

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Number of kegs of powder used	[17] 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1.
Number of non-fatal accidents	유용생님별고점목당용장성물교육 없
Number of fatal accidents	\$8884448888484 \$8
Number of employes	64444444444444444444444444444444444444
Average number of days worked	88244888888888
Total production of coal in gross and	4,590,562 4,272,333 4,412,314 4,711,334 4,711,334 4,711,334 4,711,334 4,711,334 4,711,334 4,711,334 4,711,334 4,711,334 4,712,344 4,712,
Number of tons sold to local trade and used by employes	29, 747 213, 414 213, 414 31, 355 31, 355 31, 31, 317 31, 31, 31, 31, 31, 31, 31, 31, 31, 31,
Number of tons used for steam and heat at collieries	20.7. 412 20.7. 412 20.7. 412 20.4. 451 20.4. 451 20.4. 451 20.5. 30. 20.7. 30.
Dy tail or otherwise	4, 121, 907 8, 311, 315 5, 170, 744 4, 130, 744 6, 170, 744 6, 170, 33 6, 170, 33 6, 170, 33 6, 170, 33 6, 170, 33 7, 170, 33 7, 170, 33 8, 31, 30 8, 31, 30 1, 35, 30 1, 30 1, 30 1, 30 1, 30 1, 30 1, 30 1, 30 1, 30 1, 3
Districts	First, Second, Fourth, Fourth, Fifth, Fifth, Fifth, Fifth, Fireth, Fifth, Fifth, Fifth, Fourteenth, Fourteenth, Fifthenth, Fifthenth, Fourteenth, Four

# ABSTRACT FROM REPORT-ANTHRACITE REGION-Continued

-			12 3 6 5 7 7 2 9 9 5 7 1 2 9 9 5 7 1 2 9 9 5 7 1 2 9 9 7	9
		Number of air compressors		166
		Number of electric dynamos	# # # # # # # # # # # # # # # # # # #	81
	ot f	Quantity in gallons delivered surface per minute	28.28.28.28.28.28.28.28.28.28.28.28.28.2	447, 351
	əşnu	Capacity in gallons per min	46. 379 82. 379 82. 373 82. 373 83. 373 83. 256 83. 256 83. 256 85. 255 86. 258 86. 258 86. 258 86. 258 86. 258 86. 258	745,630
	guir	Number of pumps delive	09 4 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5	820
		Total horse power		425, 203
	lls :	Number of steam engines of		4,652
	6.50	Electric	2000 00 00 00 00 00 00 00 00 00 00 00 00	84
	Locomotives	TiA	€ 000 10 4 5100 401	17
	Loci	паэзг	19482182821824	405
		Total horse power	17, 18, 18, 18, 18, 18, 18, 18, 18, 18, 18	413,441
	ilers	Horse power	28.25.25.25.25.25.25.25.25.25.25.25.25.25.	335, 148
	Number of Boilers	TeluduT		2, 256
	Num	Horse power		78, 293
		Cylindrical		2,456
		Districts	First. Second, Furth, Futh, Fith, Fith, Second, Second, Second, Touth, Therenth Futh, Fourteenth Fourteenth, Fourteenth	Totals,

TABLE A-ANTHRACITE, 1903

Number of each class of employes in each district

		# 11 0 11 8 12 8 18 18 18 18 18 18 18 18 18 18 18 18 1	SST
	Grand total, inside and outside	25 - 25 - 25 - 25 - 25 - 25 - 25 - 25 -	151, S.
	ebishno fahol'	EASE SEVERS CONT.	49,772
0	All other employes	1,113 1,113 1,116 1,116 1,136	24,005
Outsid	Book-keepers and clerks	5984418435556655	212
Employed Outside	Slate pickers (men)	44888888848481 5547488888848481	5,234
ons Em	Slate pickers (boys)	2566 613 613 873 743 743 743 743 743 753 1,857 1,857 325 325	11,430
of Persons	Engineers and firemen	1848 888 884 888 888 888 888 888 888 888	5,453
Occupations	Discksmiths and carpenters	62 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	2, 432
Occup	nemerol abiatnO	4848484848488888	361
	Superintendents	0 vol. ≈1ro×83445 kg4	145
	ebisni faro'l'	F. A.C. F. W.F. W. W. W. P. F. A. P. P. S. S. S. P. F. A. P. P. P. S. S. S. P. F. F. P.	102,055
	VII other employes	252 154 1518 308 300 300 11,151 11,151 11,177 11,17	11,924
de	Company men	1, 130 1, 130 1, 130 1, 130 1, 130 1, 130	9,050
Insi	uəmdun <sub>c</sub> ı	8888888884848484	880
mployed	Door-boys and helpers	82 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8	3,087
Persons Employed Inside	Drivers and runners	1, 0.07 1, 0.0	11,251
Jo	Miners' laborers	2, 620 22, 262 22, 260 22, 260 22, 465 22, 487 22, 428 11, 387 11, 387 11, 387 14, 477 487 14, 477	27, 533
Occupations	s1911IA	449944494944444 44944444444	36,823
Oceu	Fire bosses and assistants	8 <u>8</u> 8888888888888888888888888888888888	241
	Assistant mine foremen	<u> </u>	376
	инте тогетие	8.853.88888855555832	326
	Districts	Pirst. Poscond. Phiral Phiral Phiral Phiral Phiral Pirth. Sixth. Sixth. Pictoronth Postoronth	Totals,

## TABLE B-ANTHRACITE, 1903

Causes of fatal accidents in and about the mines, and number attributable to each cause; number of wives made widows and children orphaned by reason of such accidents

	Percentage	49.30 16.43 6.10 3.99 8.92 7.28	1.41	100.00	27.18 27.18 2.17 2.17 19.35	100.00	
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	Поптеента	1140 000	H 01	35	H 00 : H 00	oo	43
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	Түейги	E 0 0 0		83	H 63 : : : : : : : : : : : : : : : : : :	10	88
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rs th	Ninth	4000	c1 4	34	84	19	550
Districts	пзыд	H 000 H 0000 ic	1	35	AH : : :	61	37
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	baidT	H C 1		88		4	30
	puoses	10 61 61 61	1 : : :	<u></u>	0	60	\$00 000
	dari 4	14		81	HH ::01	4	56
	Causes of Accidents Inside	Falls of coal, slate and roof,  Mne cars. Explosions of gats and dust, Explosions of preveler and dynamite, Premature blacts. Fallings fine shalts, slopes, etc. (Crushed at hatteries,	Sufficient materials of otherwise, Machinety. Miscellaneaus,	Totals,	Cars. Causes of Accidents Outside Machinery. Sufficient in chutes, etc., Boiler ext. asfons.	Totals,	Grand total inside and outside,

Number of widows, 269. Number of orphans, 522.

TABLE C-ANTHRACITE, 1903

Causes of non-fatal accidents in and about the mines, and number attributable to each cause

	ope,u i tod	11 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	1 4 F	Jet jet	- H H H H H H H H H H H H H H H H H H H	134	100,00	
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	din-shid?	[12] S 11	1-	3	; :: il	122	8	108
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	bridT	등존심으의 #	9	61		:1	9	19
	Second.	88 Bre e	9	12	-:		13	2
	farf	71 A 00 01 10	24	7	::::1	-	9	2
Causes of Accidents Inside		Mure cars, state and roof,  Mure cars, Explosions of gas and dust, Explosions of powder and dynamite, Franklus hasts, Frailing mto sharts, stops, etc.  Kicked by mules, etc.	Machinery. Miscellaneous,	Totals,	Canses of Accidents Outside Cars, Machinery, Salactinery, and attention of the cars.	Forther explications. Misserllaments,	Totals,	Grand total inside and outside,

TABLE D-ANTHRACITE, 1903

Number of gaseous and non-gaseous mines, number of foremen, assistants and fire bosses, production of coal from gaseous and nongaseous mines and washeries, and percentage of production from each

Percentage of production from washeries	2.38 17.65 11.05 11.05 11.08 11.08 11.08 11.08 11.08 11.08
Percentage of production for some mort	7. 2. 2. 2. 2. 2. 2. 2. 2. 2. 2. 2. 2. 2.
Percentage of production from gaseous mines	4.5.88 8.8.3.3.9.9.9.8.8.8.8.9.9.9.9.9.9.9.9.9.
Production, in tons, from washeries	152.214 323.986 323.986 322.017 942.091 16.325.770 14.629 407.847 809.244 809.244 809.244 809.244 809.244 809.244 809.244 809.244 809.244 809.244 809.244 809.244
Production, in tons, from non-gaseous mines	2, 186, 438 2, 533, 906 27, 490 27, 490 27, 490 27, 130 116, 581 116, 763 116, 763 116, 763 118, 826 118, 826 118, 826 118, 826 118, 836 118, 836 1
Production, in tons, from	2.220, 911 1.574, 431 8.572, 431 8.572, 431 8.572, 431 8.572, 635 8.720, 535 8.673, 788 8.673, 788 8.773, 788
bns nemerol lo redmuM ni nemerol insisisse senim succession	21 38 88 88 88 88 88 88 88 88 88 88 88 88
Suosesg-non 10 redmuN	0.74 6.62 6.62 6.63 6.63 6.63 6.63 6.63 6.63
sessod ein to redmin	23 25 25 26 27 27 20 20 20 20 20 20 20 20 20 20 20 20 20
bns nemer of foremen assistant foremen sasistant foremen sample of the foremen and the foremen	01188888888888888888888888888888888888
Number of gaseous mines	281 281 283 386 386 386 386 113 113 113 113 113 113 113 113 113 11
Districts	First, Second Second Second Percent Percent Pourth, Sixth, Saventh, Fighth, Thirteenth, Thirteenth, Flutteenth, Fl

CORRECTED TABLE E, PAGE XLI.

Quantity of coal produced by each company that produced 700,000 or more tons, and the number of persons employed

Employes	23, 999 14, 180 14, 217 19, 229 19, 229 17, 526 17, 536 17, 53	
Production of coal in tons	10, 051, 329 6, 722, 731 6, 727, 600 5, 728, 731 1, 92, 938, 154 1, 693, 168 1, 170, 548 1, 170, 548 1	
Numbers of Inspection Districts	delphia and Reading Coal and Iron Company, rate, Lackawanna and Western Railroad Company, First, Third, Fourth, Sixth, Seventh, Eighth, First, Third, Fourth, Eighth, Eleventh, Eighth, Fourth, First, Sixth, Seventh, Eleventh, Fifteenth, Seventh, Eighth, Fourth, First, Sixth, Seventh, Eighth, Seventh, Eighth, Seventh, Eighth, Seventh, Eighth, Seventh, Eighth, Seventh, Eighth, First, Third, First, First, First, Seventh, Eighth, Seventh, Eighth, Seventh, Eighth, Sixth, Eighth, Eighth, Eighth, Fourteenth, Sixth, Eighth, Fourteenth, First, Eighth, Fourteenth, First, Eighth, Fourteenth, Fourteenth, First, Eighth, Fourteenth, First, Eighth, Fourteenth, Fourteenth, First, Eighth, Fourteenth, Fourteenth	
Names of Companies	Philadelphia and Reading Coal and Iron Company, Delaware, Lackawanna and Western Railroad Company, Delaware Lackawanna and Western Railroad Company, Lehigh Valley Coal Company, Lehigh Valley Coal Company, Lehigh Coal Company, Seranton Coal Company, Seranton Coal Company, Hillside Coal and Navigation Company, Hillside Coal and Navigation Company, Hillside Coal and Iron Company, Furnile Iron Company, Thinkson Coal Company, Coa Brothers and Company, Minerson Coal Company, Coal Company, Coal Company, Minerson Coal Company, Parrish Coal Company, Treats	



TABLE E-ANTHRACITE, 1903

Quantity of coal produced by each company that produced 700,000 or more tons, and the number of persons employed

Number of	,
Production of coal in tons	2. 181.9 2. 181.9 2. 181.9 2. 181.9 2. 181.9 2. 181.9 2. 181.9 2. 181.9 3.
Numbers of Inspection Districts	delphia and Reading Ceal and Iron Company,  the Lackawama and Western Railroad Company,  the Lackawama and Western Railroad Company,  the Lackawama and Western Railroad Company,  the And Wilkes-Parre Ceal Company,  the Milkes-Parre Ceal Company,  the Milkes-Parre Ceal Company,  the Milkes-Parre Ceal Company,  the Ceal Company,  Seventh and Bighth,  First and Ninth,  First and Third.  Seventh and Bighth,  First and Third.  Seventh and Eighth,  First and Third.  Ninth and First and  Seventh and Seventh  First and Chapany,  Seventh and Third.  Ninth and Thirdenth,  Sinth,  Ninth,  Milth,  Milth,  Seventh and Miling Company,  Seventh and Miling Company,  Seventh and Milth Company,  Seventh and Seventh and Milth Seventh and Seven
	Philadelphia and Reading Ceal and Iron Company, Delaware, Lackawanna and Western Railroad Company, Belaware and Hulson Company, Ledesth vall Wilkes Farre Ceal Company, Ledesth Vall W Cal Company, Sergance Ceal Company, Sergancharma Coal Company, Pennsylvania Coal Company, Pennsylvania Coal Company, Cas Markle and Company, Cas Bardles and Company, Cas Brothers and Company, Farrish Ceal Company, Mirreal Railroad and Mining Company, Arthural Railroad and Mining Company, Totals,

TABLE F-ANTHRACITE, 1883 TO 1903 INCLUSIVE

Jassification of employes killed or fatally injured in and about the mines

	Grand total	8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8
	Potal outside	4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4
	All others	41148882214488844888884485 68 88
oyes	Slate pickers	200 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
Outside Employes	Engineers and firemen	HQC-088828884 4448440978C-0
Outsid	Blacksmiths and carpenters	F40100150101 0004 010 014 B
	Outside foremen	H 20 H 21 H 1 H
	Total inside	274 280 280 280 280 280 280 281 281 281 281 281 281 281 281 281 281
	All others	884-854128888448887488292
	Door boys, etc.	850 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
loyes	Drivers and runners	481118888884488884444 EE
Inside Employes	Miners' laborers	2, 2, 2, 2, 2, 2, 2, 2, 2, 2, 2, 2, 2, 2
Insid	s19uiM	138 105 105 105 105 105 105 105 105 105 105
	Fire bosses	HH000100000004H H+0140100000
	Mine foremen	ore oreversion index
	Tears	1885. 1886. 1886. 1887. 1889. 1889. 1889. 1889. 1889. 1899. 1900. 1901. 1903.

## TABLE G-ANTHRACITE, 1883 TO 1903 INCLUSIVE

Number and causes of fatal accidents in and about the mines

		Istot husuf)	88888888888888888888888888888888888888	8,429		
	-Total outside		축축성성공급 Y 등도 P 중 S 한 당 E E E E E E E E E E E E E E E E E E	1,230		
	Nicoellaneas sucansilaneil		**************************************	413		
Mines		By boller explosions	क्छान्यम का-या पाठ्सक था । । वा	65		
Jo e		By suffecation	ि विस्तर सम्बद्ध स्टब्स्ट विष्ट स्टब्स्	10.0		
Outside	Ву тасріпету			272		
		By cars	468511815151515181818181818	435		
	obisni inioT		4288875888558888888888888888888888888888	7,199		
		Miscellaneous causes	######################################	360		
		By sufferation		139		
		By mules	#316+16@ W.W. 31@	23		
	eairetted at batteries		(A) (A) (A) (A) (A) (A) (A) (A)	101		
	By Explosions of By Falling into	Manways and breasts	ला प्यान या था था या प्रथा या या φ	57		
nes		sadolz	10 - 00 - 100 100 0 - 101 10 1- 20 00 4 4 4 10 00 0	88		
of Min		Shafts	4111 0000 E11 0 E E E E E E E E E E E E E	500		
Inside of Mines		xplosions of	xplosions of	Blasts, etc.	823844488888888888888888888888888888888	551
Ir				Powder, dynamite	######################################	246
		tanb bas sei)	855255888888888888888888888888888888888	684		
		By mine cars	의 년 중 중 없고 후 등 등 없고 있었다. 등 등 등 등 등 등 등 등 등 등 등 등 등 등 등 등 등 등 등	1,124		
	Falls of	Slate and roof	용무원보는 등 등 등 등 등 등 등 등 등 등 등 등 등 등 등 등 등 등 등	2,194		
	By Fa	(8,17)	. 유구 중요가 20 전 등 등 2 대 전 도 있 다 된 말 다 20 전 등 등 교	1,479		
		Years	2	Totals,		

•Nanticoke disaster: 36 persons were entombed by an inrush of quicksand. fTwin shaft disaster: 58 persons were entombed.

TABLE H-ANTHRACITE, 1892 TO 1903 INCLUSIVE

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A 2514 25 25 25 25 25 25 25 25 25 25 25 25 25
15.92 18.14 18.14 18.16 18.16 18.17 19.18 19.19 19.10 10.10 10.10 10.10 10.10 10.10 10.10 10.10 10.10 10.10 10.10 10.10 10.10 10.10 10.10

TABLE I-ANTHRACITE, 1890 TO 1903 INCLUSIVE

Fatal accidents in and about the mines

1903	8888444882484441 si	
1902	8442888888	
1901	8835888 E	
1900	\$155C\$85\$8	
1899	8 ± 6 Z ± 6 Z 5 Z 5 Z 5 Z 5 Z 5 Z 5 Z 5 Z 5 Z 5 Z	
1898	### ### ### ### ######################	
1897	888888888888888888888888888888888888888	
1896	28 8 2 2 4 7 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4	
1895	8484588955 E	
1894	### ### ### ### ### ### ### ### ### ##	
1893	2 H3888E	
1892	18 8 8 8 8 4 4 4 8 8 5 8 8 8 1 4 4 8 8 5 8 8 8 1 4 4 8 8 1 4 4 8 1 4 4 4 4 4 4 4	
1891	\$ 888853	
1890	포우 <u>물</u> 원운동남 온	
Districts	First. Second. Fourth. Fourth. Futh. Figh. Sweath. Sweath. Figh. Thenth. Thenth. Thenth. Thenth. Thenth. Fourth. Fourth. Fourth. Fourth. Fourth. Fourth. Fourth. Fourth.	

\*First and Second Districts reported together. ‡Number of Inspectors increased by Act of 1901.

TABLE J-ANTHRACITE, 1890 TO 1903 INCLUSIVE

Non-fatal accidents in and about the mines

1903	0.5 8 8 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
1902	E 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5
1901	1 243 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
1900	118 152 139 130 130 130 17 17 17 17 17 17 17 17 17 17 17 17 17
1899	11.030 1.030 1.030 1.030
1898	844 975 555 555 555 555 555 555 555 555 555
1897	26 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2
1896	13.4 10.0 20.5 20.5 20.5 30.1 10.6 11.0 11.0 11.0 11.0 11.0 11.0 1
18::5	11.108 11.108
1894	8 4 4 5 5 5 6 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8
1893	물면선형육품음구   중 
1892	#255555 B
1491	2
1890	공단종료목표의 발
Districts	First. Second Second Fried. From the First. Sixth. Sixth. Sixth. First.

\*First and Second Districts reported together Number of Inspectors increased by Act of 1961.

## TABLE K-ANTHRACITE, 1892 TO 1903 INCLUSIVE

Production of coal in tons of 2,000 pounds, number of tons produced per employe inside, quantity of explosives used, and the number of tons of coal produced for each pound of explosive used

Years	Production of coal in tons of 2,000 pounds  Average number of tons of coal produced per		Number of pounds of black powder used	Number of pounds of dy- namite used	Average number of tons of coal produced per pound of explosive used	
1892, 1894, 1894, 1895, 1896, 1896, 1897, 1899, 1909, 1900, 1901, 1902, 1903,	51, 226, 977 52, 841, 110 50, 966, 920 57, 351, 845 53, 893, 259 52, 531, 036 52, 302, 504 60, 518, 331 57, 363, 356 67, 094, 665 41, 340, 940 75, 232, 585	647 625 611 600 644 567 534 655 682 680 †120 ‡737	30, 981, 875 31, 723, 771 30, 755, 450 32, 766, 775 32, 117, 950 31, 804, 950 30, 670, 10 34, 317, 275 30, 929, 500 38, 020, 100 21, 128, 675 42, 529, 400	1,092,190 1,324,142 1,713,235 1,797,494 1,733,970 2,415,650 6,025,015 3,649,417 3,454,641 4,155,685 2,130,965 5,317,422	1.59 1.60 1.57 1.61 1.59 1.50 1.57 1.59 1.61 1.59	

The ton of 2,000 pounds is used so that a comparison can be made with the bituminous production per pound of powder used.

\*The increase in production per pound of powder used was caused by the production of the washeries during the strike.

†This decrease in production per employe inside was caused by the small number of days worked on account of the strike.

<sup>\$\</sup>pm\$The increase in production per employe was due to the large production of the washeries.

TABLE L-ANTHRACITE, 1890 TO 1903 INCLUSIVE

Number of employes in and about the mines, by districts

1	
1903	10, 396 9, 429 9, 429 10, 458 10, 458 11, 526 11, 626 8, 821 7, 823 7, 823 14, 580 14, 580 14, 580 14, 580 14, 580
1902	18 229 18 229 18 229 19 24 764 19 856 19,856 13,885 18,885 18,885
1901	18, 773 18, 623 17, 654 16, 108 19, 847 19, 847 12, 655
1900	17, 285 11, 678 12, 111 12, 111 12, 114 12, 175 12, 041 12, 041
1899	17, 143 15, 419 17, 156 17, 156 18, 256 18, 256 19, 905 12, 682 12, 682 12, 682
1898	17, 890 115, 725 118, 649 118, 649 118, 649 119, 567 12, 567 12, 567
1897	18,066 17,006 18
1896	11, 604 16, 359 11, 577 11, 577 11, 577 12, 058 10, 20, 195 13, 335 13, 335
1895	16, 209 16, 209 17, 413 17, 413 18, 469 19, 810 11, 399 11, 399
1894	16 014 15 627 16 92 764 20 764 20 764 19 121 10 734
1893	15, 637 14, 429 15, 779 22, 730 17, 540 19, 197 10, 777
1892	14, 121 14, 111 15, 120 21, 606 36, 277 18, 487 19, 417
1891	**23,974 10,411 11,401 11,801 11,801 18,325 9,740
1890	23, 630 15, 739 18, 947 14, 421 18, 588 8, 789
Districts	First, Second, Third, Fourth, Shitth, Sixth, Sevenh, Sevenh, Sevenh, Tenth, Therenth, Thirteenth, Fourteenth,

\*First and Second Districts reported together, †Number of inspectors was increased by the act of 1901.

TABLE M-ANTHRACITE, 1890 TO 1903 INCLUSIVE

counties
by
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about
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$_{ m 0}$
Number

TABLE N-ANTHRACITE, 1890 TO 1903 INCLUSIVE

Production of coal in tons, by districts

†First and Second districts reported together.

TABLE N-ANTHRACITE, 1890 TO 1903 INCLUSIVE-Continued

1903	4,500,500 4,500,500 4,500,500 5,511,514 6,500,500
1902	4. 5. 5. 5. 5. 5. 5. 5. 5. 5. 5. 5. 5. 5.
1901	7, 728, 344 6, 674, 080 6, 674, 080 6, 674, 080 7, 674, 080 6, 674, 080 7, 675, 080 7, 67
1900	6. 368, 94 6. 429, 112 6. 528, 528 7. 170, 57 7. 170, 171 7. 170, 171 8. 171, 171 8. 171, 171 8. 171, 171
1899	6, 774, 674 6, 774, 678 6, 774, 678 6, 774, 678 6, 774, 678 7, 514, 717 8, 514, 718 8, 514, 718 9, 501, 718 1, 718, 718 1, 718
1898	6, 249, 833 6, 515, 620 5, 65, 620 6, 617, 823 6, 1477, 187 6, 1477, 187 6, 1477, 187 6, 1477, 187 6, 1477, 187 6, 1487, 187 6, 1487
1897	6, 249, 833 5, 95, 670 5, 875, 823 6, 445, 150 6, 71, 418 6, 148, 150 6, 171, 178 6, 178
Districts	First, 5. 6.515.730

\*Number of inspectors increased by act of 1901

TABLE P-ANTHRACITE, 1890 TO 1903 INCLUSIVE

Production of coal in tons, by counties

1903	1,919,662 1,208,813 17,898,333 24,997,394 4,927,394 14,633,487 262,102 774,976 61,513
1902	986,127 986,127 916,58,991 917,883,917 917,883,718 917,883,783 917,883,783 917,883 91
1901	1,659,392 1,080,231 171,582 17,540,040 17,841,090 13,640,766 136,145 229,877 59,905,951
1900	1, 663, 901 875, 643 875, 643 19, 173, 473 4, 188, 189 19, 520 19, 520 19, 520 19, 520
1899	1, 630, 505 729, 747 729, 747 13, 248, 949 14, 339, 647 12, 256, 938 163, 555 275, 935 54, 034, 224
1808	1,445,288 661,175 661,175 661,175 11,589,601 11,589,705 141,583 422,989 47,145,174
1897	1, 327, 237 (62, 453 (62, 453 (62, 443 (71, 496, 71 (17, 41, 809 3, 774, 667 (977, 493 476, 488 476, 488
1896	1,488,550 448,335 11,702,335 11,708,479 11,09,772 11,09,772 17,678 17,678 4,117,739 48,074,330
1895	1,577,146 4°3 012 772,876 17,12,876 11,18,9,382 11,146,382 112,141 8,673,144 11,465,888 112,141 8,90,904
1894	1,589,395 693,607 11,170,382 17,243,60 9,985,092 413,578
1893	1, 510, 289 (44), 723 (44), 723 (1, 607, 550 (1, 523, 145 (3, 731, 145 (3, 731, 145 (3, 731, 145 (4, 179, 563
1892	1, 427, 543 8:89, 440 633, 870 11, 410, 554 11, 424, 364 8, 724, 364 9, 564, 564 457, 629
1891	761,558 633,509 10,184,348 117,726,560 3,672,560 9,758,111 3,450,713 3,450
1890	5.00 5.11 5.00 5.11 5.00 5.11 5.00 5.00 5.00 5.00 5.00 5.00 5.00 5.00
Counties	Carbon. 1,276,541 Columbia, 599,414 Columbia, 571,490 Luzenkawanna, 571,559 Luzenk, 15,825,674 Schuylkill, 2,098,547 Schuylkill, 6,015,26 Wayne, 70tals, 40,166,327 4

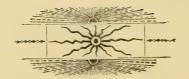
## TABLE Q-ANTHRACITE, 1870 TO 1903 INCLUSIVE

Fatal accidents per each 1,000 employes in and about the mines, and tons of coal mined for each fatal accident

Years	Employes	Fatal accidents	Fatal accidents per 1,000 cmployes	Number of tons of coal	Number of tons of coal mined for each fatal accident
1870, 1871, 1872, 1873, 1873, 1874, 1875, 1876, 1877, 1876, 1877, 1879, 1880, 1881, 1882, 1883, 1884, 1888, 1884, 1888, 1889, 1899, 1890, 1891, 1890, 1891, 1892, 1893, 1894, 1895, 1896, 1891, 1892, 1893, 1894, 1895, 1896, 1891, 1892, 1893, 1894, 1895, 1894, 1895, 1896, 1891, 1892, 1893, 1894, 1895, 1896, 1891, 1898, 1898, 1899, 1899, 1900, 1900, 1900, 1900, 1900, 1900, 1900, 1900, 1900, 1900, 1900,	35, 600 37, 488 41, 745 48, 140 53, 402 61, 946 63, 944 63, 944 63, 944 68, 847 73, 373 76, 631 82, 240 91, 421 101, 673 100, 320 103, 644 119, 919 123, 348 149, 557 142, 416 149, 557 142, 416 149, 557 142, 416 147, 651 148, 130 148, 130 151, 527	211 210 166 224 231 238 228 194 187 262 202 273 241 323 332 279 316 428 428 421 421 423 411 562 421 421 562 421 562 421 562 421 562 421 562 421 562 562 562 562 562 562 562 562 562 562	5.93 5.63 3.71 4.63 3.40 4.29 2.90 2.81 2.75 3.54 3.28 3.28 3.28 3.32 2.71 2.95 3.32 3.32 3.32 3.32 3.32 3.32 3.32 3.3	12, 653, 575 13, 888, 087 13, 889, 976 18, 751, 358 20, 885, 220 19, 611, 071 22, 077, 869 24, 843, 476 27, 711, 250 24, 843, 476 30, 210, 018 30, 867, 201 33, 200, 608 32, 561, 390 32, 561, 390 33, 520, 941 34, 064, 543 37, 137, 251 44, 328, 947 46, 347, 354 47, 145, 174 47, 145, 174 47, 145, 174 47, 145, 174 47, 145, 174 47, 145, 174 47, 145, 174 47, 145, 174 47, 145, 174 47, 174, 264 51, 217, 318 59, 905, 951 36, 911, 554 71, 17, 951	59, 970 66, 93 83, 735 83, 711 77, 034 87, 795 86, 013 113, 895 105, 768 122, 988 110, 659 106, 073 102, 788 98, 976 102, 788 98, 976 102, 975 117, 523 104, 105 107, 977 122, 103 104, 105 107,



## ANTHRACITE MINE DISTRICTS



## First Anthracite District

LACKAWANNA AND SUSQUEHANNA COUNTIES

Scranton, Pa., March 5, 1904.

Hon. James E. Roderick, Chief of Department of Mines:

Sir: In compliance with Section 15 of the Anthracite Mine Law of June 8, 1901, I have the honor of presenting my report as Inspector of the First Anthracite District for the year 1903.

The tables clearly set forth all the statistical information pertaining to tonnage and accidents, but on account of this being the first report since the division of the district, it is impossible to make an intelligent comparison of detailed results with previous years, except to state that the percentage of fatal accidents to the number of tons of coal produced was greater in 1903 than in 1902.

Respectfully submitted,

L. M. EVANS, Inspector. 4

## First Anthracite District, 1903 SUMMARY OF STATISTICS

Number of mines in district,	16
Number of mines in operation,	16
Number of tons of coal produced,	4,509,563
Number of tons shipped to market,	4,131,907
Number of tons sold at mines to local trade,	39,747
Number of tons consumed at mines in generating steam	
and heat,	337,909
Number of persons employed inside the mines,	7,825
Number of persons employed outside,	2,571
Number of fatal accidents inside the mines,	22
Number of tons produced for each fatal accident inside,	204,980
Number of persons employed per fatal accident inside,	356
Number of fatal accidents outside,	4
Number of persons employed per fatal accident outside,	643
Number of wives made widows by fatal accidents,	14
Number of children orphaned by fatal accidents,	23
Number of non-fatal accidents inside of mines,	64
Number of persons employed per non-fatal accident inside,	122
Number of non-fatal accidents outside,	6
Number of persons employed per non-fatal accident out-	
side,	428
Number of steam locomotives used inside,	2
Number of compressed air locomotives used inside,	26
Number of electric motors used inside,	25
Number of fans used for ventilation,	31
Number of gaseous mines in operation,	7
Number of non-gaseous mines in operation	. 9

## TABLE A.—First Anthracite District, 1903

## PRODUCTION OF COAL

Names of Companies	Tons
Hillside Coal and Iron Company,	831,032
Scranton Coal Company,	1,271,260
Delaware and Hudson Company,	1,218,355
Delaware, Lackawanna and Western Railroad Company,.	672,785
Temple Iron Company,	427,192
North End Coal Company,	88,939
Total,	4,509,563
Production by Counties	
Lackawanna,	3,794,587
Susquehanna,	714,976
Total,	4,509,563

Fatal and non-fatal accidents; number of tons of coal produced per accident; number of persons employed; number employed per accident TABLE B.—First Anthracite District, 1903

, Fat	Hilside Coal and Iron Co., Scranton Coal Co., Delaware, Lackawanna and Western R. R. Col.,		Totals and averages for district,	
Fatal Accidents	Outside	C 4 63	4.0.0	4
H	Isto'T	L- L- 4	46161	98
Non-fatal Accidents	əbisaI	11 6	20 8 1	64
		.0.4		9
ents	LatoT	11 8 22 22	20 8 1	02
per	Tog boombong Inco to anoT object fusions falst		168, 196 213, 5% 44, 469	204,980
	tog benuborg lace to anoT ebiani trebices latal-non		33, 639 53, : 9 ) SS, 939	70,462
ąę	Number of employes inside		1,176 S15 302	7,825
əpis	Number of employes outside		211 227 80	2,571
Total number of employes		1,617 3,438 2,530	1,387 1,042 382	10,396
solient sevolome to redmuX trabicos faint rest		177 605	294 407 151	356
Number of employes inside profits accident		112 403 104	102 302	122
Number of employes outside per fatal accident		339		643
fside.	Number of employes ou per non-fatal accident	508		428

TABLE C.—First Anthracite District, 1903 Classification of Fatal Accidents

-				
		fatot forati	69	9 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
		obistuo latoT	64	4
les.		Miscellaneous causes	-	- Q
f Min		Dy boiler explosions		
Outside of Mines		By suffocation		
Outs		By machinery	-	
		HA cars	:	
		Potal inside	П	H-000000 <b>0</b> 4
		Miscellaneous causes		
	, o.j	Sufforated by coal, e		
		By mules		
	_	Crushed at batteries		
	Falling into	Manways, breasts,	:	
v v	alling,	səd∪IS	:	
Mine	By F	Shafts		
Inside of Mines		Dy blasts, etc.		
Ins		Powder and dynamite		
		Emothered by gas		
		By explosion of gas		
		By mine cars		e inde eet
	Jo	100A		HH 0 HH0 6
	By Falls of	Slate		c1
	By	[ko?]		H H H H H
			January, February	March, May, May, June, July, Autumt, Settlemiler, Cotaber, December, December,

TABLE D.—First Anthracite District, 1903 Classification of Non-Fatal Accidents

		Grand total	702-702044Hc 0400	20
		abistuo latoT		9
w w		Miscellaneous causes		17
Mine		By boiler explosions		:
Outside of Mines		By suffocation		:   :
Outsi		Ily machinery	H   H   H   H   H   H   H   H   H   H	67
		By cars		က
	). 	9bisni IstoT	4042:24-05-428	64
		Miscellaneous causes	H i H H H H H H H	12
	te.	Suffecated by coal, e		:
		By mules		
		Crushed at batteries		
	into	Manways, breasts, etc,		
w eo	By Falling into	Slopes		
Inside of Mines	By F	รมุชน <b>ี</b> ร		
side o		By blasts, etc.	H (-01)	LO.
In		Powder and dynamite		61
		Smothered by gas		
		By explosion of gas		ಣ
		By mine cars	616901 31日 HHG1 44	15
	jo s	Roof		8
	By Falls of	Slate		1
	By	Coal		es .
			January, February, March, April, June, July, August, September, October, November, December,	Totals,

Occupations of Persons Killed or Fatally Injured Inside and Outside the Mines TABLE E.—First Anthracite District, 1903

- 111				
		firand total	о <u>пнановоннана</u>	26
		shismo InfoT	a	41
		seyolqmə redbə IIA		00
		Book-keepers and clerks		
	e e	(mom) srovoti otnis		
2	Outside	(synd) sreading chilz		
COLLINA		Engineers and firemen		1
		Blacksmiths and carpenters		
oursiac mic		nemoral ebishu()		
- 11				
aug a		əbisni İstoT	H = 6] 20 00 00 H = 6] 4	25
		All other employes		
		Company men		63
and a recent and and animal		uəmdun <sub>e</sub> ]		
		Door-boys and helpers		
	Inside	Privers and manners		ro
				2
				t+
	İ	Fire hosses and assistants.		
		Assistant mine foremen		
		Mine foremen		:
			January: February March, April, May, July, September, Sociember, Doccomber,	Totals,
			January. February. March. May. June. June. July. September October. November	Tota

TABLE F.—First Anthracite District, 1903 Occupations of Persons Injured Inside and Outside the Mines

	Grand total	<b>で</b> たでいいませいの400	70
	Total outside		9
	All other employes		2
	Book-keepers and clerks		
ф	Slate pickers (men)	H	н
Outside	Slate pickers (boys)		
	nemert and fremen		
	Blacksmiths and carpenters		
	nemeral ebistuO		
	stnebnetnitequ2		
	ebizni IstoT	4 6 4 0 0 4 H 0 12 4 0 0	61
	eavolqma tahto IIA		
	Сотрану теп	H	2
	Loupmen		1
0	Door-boys and helpers	_	1
Inside	Drivers and runners	6) 144 69	00
	Miners' laborers		139
	Miners	000 01445600400	88
	Fire bosses and assistants		
	Assistant mine foremen		
	Mine foremen		<u>                                     </u>
		January. February March, April, May, June, July August, September, October, Docember,	Totals,

TABLE G.-First Anthracite District, 1903

Nationality of Persons Killed or Fatally Injured Inside and Outside the Mines

			1		1			1		
							1			
	an		1					E		
	vmerican	inglish	Velsh	Scotch	rki	herman	olish	nstriar	Russian	Fotals
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January, February,										
farch,			1		1					
pril,lay,										,
une,uly,										
ugust,	1		1				1			
eptember, etober										
ovember,			1		1					
December,						1	3		1	
Totals,	5		4	1	3	1	S	3	1	

TABLE H.—First Anthracite District, 1903

Nationality of Persons Injured Inside and Outside the Mines

					-							
	American	English	Welsh	Inish	German	Polish	Hungarian	Italian .	Slavonian	Austrian	Russian	Totals
January, February, March, April, May, June, July, August, September, October, November, December,	1 1 2 1 2 3		1 3 1	1		2 2 1 1 1 1 1 4 5 4 1 1 1 1 1		1	1	1		5 7 5 3 3 3 4 11 9 8 4 3 8

TABLE I.—First Anthracite District, 1903

Operators and mines, kind of openings, type and size of fans, size of furnaces, volume of air produced by fan or furnace per minute, number of splits of air currents, number of persons employed inside, and quantity of air produced for each employe per minute

Average number of cubic feet polycological for normal feet for the feet for the feet feet feet feet feet feet feet	263 230 304 395	41174 6624 6624 6624 6626 6630 6630 6630 6630	223 322 11.048 1 815
Number of persons employed inside	275 412 20 231 157	1325 255 1 1 1 1 1 2 1 2 1 2 1 2 1 2 1 2 1	328 59 77 77 85
Vumber of cubic feet per minute passing out at out- fet	74,570 103,862 5,600 91,550 81,500	### 1999   1998   1998   1999	100,740 33,140 26,900 343,360 162,810
Total quantity of air per minute circulating in all the splits in cubic feet	87, 536 87, 536 4, 400 62, 550 62, 080	73. 73. 73. 73. 73. 73. 73. 73. 73. 73.	83, 430 32, 000 25, 600 250, 000 154, 000
Number of cubic feet of air per minute entering the mine at inlet	83.828 83.828 83.828 83.728 60.63 60.63 60.63	8,48,19,00,00,00,00,00,00,00,00,00,00,00,00,00	89,870 35,2 0 28,700 266,641 148,320
Number of splits of air cur- rents	49100	84444446888	00 20 60 FD 44
Power used	Steam, Steam, Steam, Steam,	Stram, Steam, Steam, Steam, Steam, Steam, Steam, Steam, Gasoline, Gasoline,	Steam, Steam, Gasoline, Steam,
nsl lo emsZ	Guibal, Guibal, Guibal, Guibal, Guibal,	Guibal, Guibal, Guibal, Guibal, Guibal, Guibal, Guibal, Guibal, Guibal,	Guibal, Guibal, Guibal, Guibal, Guibal,
ni-beqoleveb developed-in sedoni	<b>७</b> व. व. ळ. छ	44 8 8 8 9 9 4 1 1 2 2 2 2 4 1 1 2 2 2 2 2 2 2 2 2 2	2.40 .40 1.50 2.50
rad anoitulovar to redmin atunim	100	500000000000000000000000000000000000000	25 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5
Depth of blades in feet	10 1- 1- 10 10	က+လက်လယ္လမ္းမွာလက္ ကို ရွက္လြဲ	6 6 6
Width of blades in feet	60-1-06	44070000047004	5 4 5 5 5 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6
Diameter of fan in feet	24 44 44 44 44 44 44 44 44 44 44 44 44 4	2008 24 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	20.5 17 20 20 20
Method of ventilation	Fan, Fan, Fan, Fan,	Fan, Fan, Fan, Fan, Fan, Fan, Fan, Fan,	Fan, Fan, Fan, Fan,
Gaseous or non-gaseous	Non-gas. Non-gas. Non-gas. Non-gas.	Gaseous. Non-gas. Non-gas. Non-gas. Non-gas. Non-gas. Non-gas. Non-gas. Non-gas.	Non-gas. Non-gas. Gaseous, Gaseous,
Kind of opening	Shaft Shaft Shaft, Slope	Shaft Shaft Shaft Shaft Tunnel Tunnel Shaft Shaft Shaft	Drift, Drift, Drift, Shaft,
Names of Operators and Mines	Hillside Coal and Iron Co. Clifford mines. Forest City shaft, Dummore Vein. Forest City sl-ipe, Glenwood mines,	Richmond No. 3 mines. Richmond No. 4 mines. Richmond No. 4 mines. Johnsons No. 2. Johnsons No. 2. Ontario collicry. Sturgess shaft. Ontario collicry. Sturgess shaft. Ontario, Jermyn No. 6. Ontario, Blue Ridge tunnel. Ontario, Blue Ridge shaft. Raymond No. 1 shaft. Raymond No. 1 shaft.	Delaware and Hudson Co. Coal Frook, Wilson opening. Coal Brook opening. Coal Brook. Mills opening. Leggitt's Creek No. 1 shaft. Leggitt's Creek No. 2 shaft,

898	253 307 446	1 2 3 4 5	6.1
233	432 261 251	845 129 171	# #
224,500 304,540 387,560	113.860 153,745 216,001	125,000 20,000 46,150 58,120	61,300
200   213, 400   22 000   211, 0.0   30 000   275, 660   38	116, 461 116, 461 111, 461	12tr, 0-0 55, oud 43, 495 92, C25	
203, 300 1 298, 000	111,585 1 137,725 137,055	120,000 NG,000 46,125 98,070	59, 1001 56, 501
121-7	ll sas	(3.512.50	to
Steam, Steam,	Steam,	Steam,	
Guibal, Guibal, Guibal,	Guibal, Guibal, Guibal,	Guibal, Guibal, Guibal,	
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523	98 8 20	S 22 SS	
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21010	मा ६ क	10 100	
81818	14 16 16	8 14.5 16.5	
Fan, Fan,	Fan, Fan,	Fan, Fan, Fan,	Natural,
Gaseous, Gaseous, Gaseous,	Gaseous, Gaseous, Gaseous,	Gaseous, Non-gas. Non-gas. Non-gas.	Non-gas.
Shaft, Shaft, Slope,	Shart	Shaft, Tunnel Slope,	Tunnel,
Leggitt's Creek No. 3 shaft, Marvine No. 1 shaft, Marvine slope,	Storys No. 2, mine, Storys No. 3 mine, Storys No. 3 mine, Storys No. 3 mine,	Lackawanna mine. Lackawanna mine. Northwest mine. No. 1 slope. Northwest mine No. 2 slope.	North End,

TABLE 1.—First Anthracite District, 1903
Operators, Location of Collieries, Railroads, Etc.

-11							
	Railroad to Mine	Erie Erie Delaware and Hudson	Ontario and Western Optario and Western Ontario and Western Ontario and Western Ontario and Western Ontario and Western	Delaware and Hudson Delaware and Hudson Delaware and Hudson	D., L. and W.	Erie Delaware and Hudson	Ontario and Western
	P. O. Address	Forest City, Forest City, Mayfield,	Allen, Peckville, Allen, Allen, Allen, Allen, Allen,	Scranton, Scranton,	Scranton,	Carbondale,	Scranton,
	Name of Superin- tendent	S. J. Jennings, S. J. Jennings, J. F. Gallagher,	Wm. L. Allen,	E. W. Scharar, Finley Ross,	Walter Reese,	John W. White, Jas. Reese,	E. E. Roderick,
	P. O. Address	Scranton, Scranton, Scranton,	Scranton, Scranton, Scranton, Scranton, Scranton,	Scranton, Scranton, Scranton,	Scranton,	Scranton,	Scranton,
	Name of General Superintendent	V. L. Peterson, V. L. Peterson, V. L. Peterson,	John R. Bryden John R. Bryden John R. Bryden John R. Bryden John R. Bryden John R. Bryden	C. C. Rose, C. C. Rose,	R. A. Phillips,	F. H. Hemelright,. F. H. Hemelright,.	E. E. Roderick,
	County	Susquehanna,. Susquehanna,. Lackawanna,.	Lackawanna,. Lackawanna,. Lackawanna,. Lackawanna,. Lackawanna,. Lackawanna,.	Lackawanna,. Lackawanna,. Lackawanna,.	and Lackawanna, R.	Lackawanna,. Lackawanna,.	Lackawanna,.
	Names of Operators and Collieries	Hillside Coal and Iron Co. Clifford colliery. Forest City colliery. Glenwood colliery.	Scranton Coal Co. Richmond No. 3 colliery. Richmond No. 4 colliery. Johnsons colliery. Ontario colliery. Riverside colliery. Raymond colliery.	Delaware and Hudson Co. Coal Brook colliery, Marvine. Leggitts Creek,	Delaware, Lackawanna and Western R. R. Co. Storrs,	Temple Iron Co. North West colliery.	North End Coal Co.

Number of tons of coal mined in each colliery, number of days worked, number of persons employed, number killed and injured, number of kegs of powder used, etc. TABLE 2.—First Anthracite District, 1903

		0	-	,			-	1			-	
Names of Operators and Collieries	County	Number of tons of cosl shipped by rail or otherwise	Number of tons used for steam selfeiller at affect	Number of tons sold to local	Total production of coal in tons	хитрег об даух тогжед	Number of employes	Number of fatal accidents	Number of non-tatal accidents	Number of kegs of powder used	used bounds of dynamite	Number of herses and mules
Clifford collection Co. Power City collection Glenwood collecty.	Susquehanna Susquehanna,. Lackawanna,.	189,687 + 480,781 86,420	18 19 19 19 19 19 19 19 19 19 19 19 19 19	1,437	203, 323 *511, 653 110, 728	#2251 825.83	446 320 239	eo ::t ←	H2H	S. 241 28. 080 1,946	6.534 1.832 1.832	6.55
Glenwood washery,	Lackawanna,.	756,848	59,84)	8,936	825,7(4	22	1,606	1-	11 3,	63	23, 0, 8	157
Totals,		762,216	688.63	8,936	831,032		1,617	t-	11 35,	201	23, 008	1001
Richmend No. Reputon Coal Co. Richmend No. I. Johnsens, Johnstens, Riversick, Raymend,	Lackawanna, Lackawanna, Lackawanna, Lackawanna, Lackawanna, Lackawanna,	\$8,287 25,770 345,188 210,020 97,300 260,671	6, 45, 85 39, 60 39, 60 14, 610 16, 200	3,652 1,711 4,000 3,000	887,888 87,888 119,881 12,848 12,848 13,848 14,848	aeenas Teenas	1325 333 146 35 35 35 35 35 35 35 35 35 35 35 35 35		H = = = =	850 687 684 888 181 181 181 181 181 181 181 181 1	1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1	182288
Raymond washery,	Lackawanna,.	1, 027, 836	3,776	9,663	1,148,177	186	69 363	:   u=	63	851	87,912	329
Totals,		1,115.645	114,454	11,161,	1,271,260		3.43	t-	3.0	51	87.912	330
Coal Brook, Marvine,	Lackawanna,. Lackawanna,.	516, 586 287, 695	16,300 26,290	- - - - - - -	732, vn6 316, 934	1967	1,004	01	5 114,	14,0,0 11,0,6	2,168	88
*138,488 tons produced at Forest City colliery were prepared for shipment at Clifford breaker	were prepared	or shipment	t at Clifford	breaker		‡To	tals in	this co	Totals in this column are averages.	se avera	Sees.	

TABLE 2-Continued

Number of horses and mules	54	194	194	93	79	153	139	947
Number of pounds of dynamite	10,967	28,879	28,879	12,859	1,938 4,965	6,903	246	159,807
Number of kegs of powder used	15,760	41,386	41,386	27,276	4,589 8,190	12,779	2,361	161,177
Number of nonfatal accidents	6	22	23	20	819	~	н	02
Number of fatal accidents	63	00	4	4	.03	63	63	26
Number of employes	292	2,496	2,530	1,357	457 585	1,042	385	10,396
Уитрет от даух worked	277	272 62		205	214	193	162	
snot ni fsoo to nottoubord fator	344,722	1,194,552	1,218,355	673, 785	225, 190 202, 002	427.1+2	88,930	4,509,563
Number of tons sold to local trade and used by employes	4,755	7,704	7,706	3,643	655	6,061	2,240	39,747
Mumber of tons used for steam N solfields at a football	51,526	94,116	94,116	34,461	12, 648 18, 350	30,998	4,000	337,909
Number of tons of coal shipped by rail or otherwise	288, 441	1,092,732	1,116,533	634,681	211,887 178,246	390,133	82,699	4,131,907
County	Lackawanna,.	Lackawanna,.		Lackawanna,.	Lackawanna,. Lackawanna,.		Lackawanna,.	
Names of Operators and Collieries	Leggitt's Creek,		Totals	Delaware, Lackawanna and Western R. R. Co. Storrs,	Temple Iron Co. North West, Lackawanna.	Totals,	North End Coal Co.	Grand totals,

TABLE 2-Recapitulation

selium buts served to redund	1.5 33.0 1.94 96 1.3 19	947
Number of pounds of dynamite	614749 614749 824784 824784	159, No.
besu tebwod to sged to tednink	\$2.50 \$2.50	161.177
Stubbioon later-non to redunz	= 1818/-	02
Number of fatal accidents	1~1~++:101	26
seyoldme to redminX	1.00 cm 1.00 c	10,396
Number of days worked (Not including washeries)	24.25.25.25.25.25.25.25.25.25.25.25.25.25.	208
Total production of coal in tons	S31, 022 1, 271, 280 1, 218, 255 672, 755 427, 172 88, 989	4,509,563
Number of tons sold to local seventhers and used by employees	2,11 12,83,93 12,83,93 12,83,93 12,83,93 13,83,93 13,83,93 13,83,93 13,83,93 13,83,93 13,83,93 13,83,93 13,83,93 13,83,93 13,83,93 13,83,93 13,83,93 13,83,93 13,83,93 13,83,93 13,8	39,747
Number of tons used for steam and heat at collieries	60, 080 111, 454 94, 116 34, 181 30, 988 4, 000	337,949
Number of tons of coal shipped	762, 216 1, 145, 645 1, 116, 533 681, 681 599, 133 82, 639	4,131,907
County	Lack. & Susq. Lackawanna. Lackawanna, Lackawanna, Lackawanna. Lackawanna.	
Names of Operators and Collieries	Hillside Coal and Iron Co., Scranton Coal Co., Delaware and Hudson Co., Delaware Larkawanna and Western R. R. Co., Temple Iron Co., North End Coal Co.,	Totals,

TABLE 2-Continued

	Number of air compressors	: : : :			H : : : : : : : : : : : : : : : : : : :	co :	6.3	<b>4</b> .0	10
	Number of electric dynamos	10	50	2	୍ରାରୀ -	ro :	10		F
92Bl	Quantity delivered to sur per minute—gallons	1,200	6,015	6 015	650 423 4,000 1,147 950 2,935	16, 164	10,504	4,000	8,000
әұп	Capacity in gallons per min	2, (40 1, 400 4, 456	7,896	7,896	2,000 1,750 4,402	14,6%2 650	15,332	8,300	14,255
Suir	Number of pumps delive	465	16	16	Ø1 110 10 10 10 10	87	ङ	24.00	6
	Total horse power	495 2,500 300	3,295	3, 295	1, 860 1, 860 1, 101 1,101	6,841	7,(21	5.80 2,242 3,086	5,908
Ils '	Number of steam engines of	9 17 6	65	33	1-12 0 3 3 E 1 0 1 1 0 1 0 1 0 1 0 1 0 1 0 1 0 1 0	52	91	55.05 50.05	83
ves	Electric	2	2	1-	6164 61	9	9		
Locomotives	TiA							10	26
Loc	Steam	ଶ୍ୟ	4	4	H H4 6	∞ ⊢	6	44	4
	Total horse power	650 1,420 9:0	2,970	2,970	1,795 1,795 1,235 880 880	5,410	5,740	840 740 2,480	4,060
F.S	Horse power	1,420 1,900	2,970	2,970	1,595 1,595 1,595 1,595 125 125	3,975	4,305	600	2,600
Number of Boilers	Tubular	7 11S	37	37	<u>ചചച്ചത്ത</u> ്	SS 60	41	5 10	15
umber	Horse power				375 775 180 105	1,435	1,435	240 740 480	1,460
Z	Cylindrical	: : :		:	311	533	133	55.5	73
	County	Susquehanna Susquehanna Lackawanna,			Lackawanna Lackawanna Lackawanna Lackawanna Lackawanna	Lackawanna,.		Lackawanna,. Lackawanna,. Lackawanna,.	
	Names of Operators and Collieries	Hillside Coal and Iron Co. Clifford colliery, Forest City culliery, Glenwood colliery,		Totals,	Scranton Coal Co. Richmond No. 3, Richmond No. 4, Johnsons, Ontario, Riverside Raymond,		Totals,	Coal Brook, Marvine, Leggitt's Creek,	

		Ш	-					_
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	11		ct	£-	Ę		1.0	113
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•	Lackawanna,.		Lackawanna,.	kawar			Lackawanna,	
D. L. and W R R Co	Storrs,	Temple Iron Co.	North West,	Lackawanna, Lack	Totals,		North End,	Grand totals,
D	Storrs,	;	North West,	Lаскаwanna	Totals,		North End,	Grand

TABLE 2-Recapitulation

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		:	1
	6,915 17,1915 8,180	11,126	9.211
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	1,086 11,086 14,48	2,16r 6,756	10,373 50,241
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ı	3,295 5,908	1,301	0.960
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	Hilistde Coal and Iron Co. Seranton Coal Co. Delaware and Hudson Co. Delaware, Lackawanna and Western R. R.	Co., Temple fron Co., North End Coal Co.	
11	H 32 H H	1. 64	

TABLE 3.—First Anthracite District, 1903 Number of Each Class of Employee at Each Colliery

		the state of the s					
		obisino bas obisai totot baside	446 921 230 11	1,617	257 116 921 923 733 733 69	3,438	1,04
	side	sbistuo IstoT'	140 163 65 11	379	81 21.0 302 302 11.7 11.87	1,017	241 141 145 169
	Outside	All other employes	1885	191	#843555	419	92 SS 88 88 88 88 88 88 88 88 88 88 88 88
	oloyed	Воок-кееретя япа стетка	co 60 · · ·	9	— H 01 00 01 01	11	61110 9
,	s Eml	Slate pickers (men)	815 s 4	100	\$3880×9	155	82 2 151
	Persons Employed	Slate pickers (boys)	225	69	24.888 g	245	115 2 33 9 13
	Jo	Engineers and firemen	9215	33	5 2 2 2 2 3 3 5 5 5 5 5 5 5 5 5 5 5 5 5	118	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
	Occupations	Blacksmiths and carpenters	173	125	20012112	54	000t- 183
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cu comery		obiani latoT	306 758 174	1,238	276 721 721 627 179 546	2, 421	697 586 590 590 1.873
at Each	ide	.//li other employes	113	63	848 64	159	18 10   S
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Class	Pers	Urivers and runners	1888	174	35555	30.00	88 14 15 15 15 15 15 15 15 15 15 15 15 15 15
Each C	Occupations of Persons	Miners' laborers	105 283 49	61-1-	84448	763	268 166 210 644
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Number		Assistant mine foremen	:	63	-00-01	t~	4 : :   4
n		Mine foremen		60	=======================================	\sigma	H 51 63   16
		County	Susquehanna, Susquehanna, Lackawanna, Lackawanna,		Lackawanna, Lackawanna, Lackawanna, Lackawanna, Lackawanna, Lackawanna, Lackawanna,		Lackawanna, Lackawanna, Lackawanna, Lackawanna,
		Names of Operators and Collieries	Hillside Coal and Iron Co. Clifford colliery, Clorest City, Glenwood, Glenwood washery,	Totals,	Scranton Coal Co. Richmond No. 4, Onlarions, Ontario, Riverside Raymond washery,	Totals,	Delaware and Hudson Co. Coal Brook Marvine Leggitt's Creek, Leggitt's Creek washery, Totals,

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es	c)	00	-	51
Lackawanna,.	Laekawanna,. Laekawanna		Laekawanna,.	
D., L., & W. R. R. Co. Storrs colliery,	Temple Iron Co. North West. Larkawanna,	Totals,	North End,	Grand totals,

TABLE 3-Recapitulation

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TABLE 3-Continued

					Number	Number of Days Worked	's Work		h Mont	Each Month in Breaker	aker			
Names of Operators and Collieries	County	January	February	March	IirqA	May	June	July	jsu2n¥	September	October	Мочетрег	Deccmber	TetoT
Clifford colliside Coal and Iron Co. Specification (197), General and Iron Co. Glenwood, Specification (197), Spec	Susquehanna,. Susquehanna,. Lackawanna,.	21.7 22.6 17.2	19.4 23.5 15	17.3	19.3 21.9 14.2	20.7 23.8 12.6	21.9 25.2 9.9	22.9 24.8 13.9	21.6 24.1 13.9	20.3 19.2 13.3	16.9 14.7 4.4	13.1	14.8	228 247 128
Averages,		20.5	19.3	16.7	18.5	10	10	20.6	19.9	17.6	13	13.3	13.8	2)1
Richmond No. 3, Richmond No. 4, Infermond No. 4, Infermond No. 4, Infermond No. 6, Infermore No. 6, Infermor	Lackawanna,. Lackawanna,. Lackawanna,. Lackawanna,. Lackawanna,. Lackawanna,.	20.2 6.9 23.5 21.8 19	19.6 6.2 6.2 15.7 18.1	19.6 5.8 16.7 20.8 18.4	19.2 18.4 18.5 20.5 17.2	18.2 9.9 9.9 22.5 18.3 17.8	21.2 20.3 20.5 20.5 18.6	22.1 8.7 19.6 23.1 16.3	14.6 8.5 17.4 18.9 14.3	1.6 10.8 14.5 17.7 15.9	8.5 8.5 8.5 12.8 16.7	13 7.9 13.3 19.6 11.7	8.2.2 8.2.2 1.3.7.7.0 1.00 1.00	187 101 196 225 215 189
Averages,		19	16.5	16.5	17.3	18	18.8	18.3	15	12.1	10.0	12.9	10.5	186
Coal Brook Delaware and Hudson Co.  Marvine, Legitt's Greek.	Lackawanna,. Lackawanna,. Lackawanna,.	25.00 24.00 26.33	25.55 23.00 28.11	23.88 24.00	22.44 25.44 24.00	21.66	22.41 24.88 24.66	24.06 23.55 23.55	21.44	21.44 20.44 20.77	14.33 16.88 18.00	20.66 20.00 19.55	20.66 22.00 21.22	267 272 277
Averages,		25.1	24.9	25	124	23.3	24	24	24.3	20.9	16.4	20.1	21.3	272
Delaware, Lackawanna and Western R. R. Co. Storrs colliery,	Lackawanna,.	25.5	18.6	12.9	23.6	21.8	21.7	22.1	21.7	19.5	14.7	17.5	14.9	235
North West.	Lackawanna,. Lackawanna,.	19.3	17.3	18.8	17.8	18.9	18.7	20.5	20.5	19.5	13.8	16.3	12.5	214
Averages,		17.7	15.9	16	17	17.5	17.3	17.6	17.3	16.8	12.5	14.9	12.6	193
North End Coal Co.	Lackawanna,.				11	19.7	20.7	21.2	19.4	18	18.7	8.77	15.9	162
Averages,		21.6	19	17.4	18.6	19.7	20.3	20.6	19.6	17.5	14.2	16.1	14.8	208

# TABLE 3-Recapitulation

	IntoT	201 186 186 198 168	2 8
	Teceniber	13.8 10.1 11.0 11.0 12.6 12.6	14.8
i.	November	13.3 12.9 17.5 17.5 17.0	16.1
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onth in	September	17.6 19.1 19.5 10.8 15.8	17.5
Number of Days Worked Each Month in Breaker.	August	6.52 6.52 6.52 6.53 6.53 6.53 6.53 6.53 6.53 6.53 6.53	19.6
orked I	luly	20.6 18.3 24 22.1 17.6	20.6
Days W	lune	8. 42. 12. 12. 12. 12. 12. 12. 12. 12. 12. 1	20.3
oer of I	Мау	18 18 18 17.5 15.7 16.7	19.7
Numl		18.5 17.2 24 23.6 17	18.6
	Матећ	16.7 16.5 25. 12.9 16.5	17.4
	Espinsiy.	19.3 16.5 24.9 18.6 15.9	61
,	January	20.5 15.7 17.7	21.6
	County	Laek, & Susq. Laekawanna,, Laekawanna,, Laekawanna,, Laekawanna,, Laekawanna,	
	Names of Operators and Collieries	Hillside Ceal and Iron Co., Seranto n. Ceal Co., Delaware, and Hodson Co., Delaware, Lastlawarma and Western R. R. Co., Temple Iron Ce., North End Ceal Company.	Average 8.

TABLE 4.—First Anthracite District, 1903 Fatal Accidents in and about the Mines

Nature and Cause of Accident in Brief	Smothered by culm. He was working at the end of a culm line, when the bank	gave way from under him.  By falling 30 test over a railing in the breaker while making his daily ex-	amination. For reason, not known, he overreached. By fall of roof. After firing two blasts in succession they returned to examine the results, then took their lunch and	returned to the face the second time.  A piece of roof fell, killing Henry in- startity and injuring a miner.  By falling from cars. He was riding out on cars that became derailed and re- ceived such injuries that when found	he was dead.  By falling under moving cars. He was crossing between cars when he fell under, the wheels massing over his	body. He was killed by a fall of roof that he	Killed in the face of his chamber by a fall	by fall of rock roof in his chamber that	gave no sign or warning of danger.  By cars. He attempted to cross between cars while the minner was binning in	a car behind him. He received a badly lacerated leg, from which he died the next day.
County	Lackawanna,.	Lackawanna,.	Lackawanna, .	Lackawanna,.	Lackawanna	Lackawanna,	Lackawanna,.	Susquehanna,.	Susquehanna,.	
Name of Colliery	Raymond washery	Johnsons No. 2, Lackawanna,	Coal Brook,	Storrs No. 1,	Coal Brook,	Leggitt's Creek,	Johnsons No. 2,	Clifford,	Clifford,	
Number of orphans	н	:	67	:		:	:	:	:	
Number of widows	-	:	H	:		:	-	:	:	
Married or single	Ä.	σź	M.	<i>v</i> i	zi.	υż	M.	vi	vi	
93A	37	ç3 70	%	গ্র	17	30	33	45	13	
noitagussO	Flusher,	Breaker eng.	Laborer,	Runner,	Switch boy,.	Miner,	Miner,	Miner,	Driver,	
Vationality	American,	American,	American,	Welsh,	Irish,	Welsh,	Polish,	Irish,	Polish,	
Name of Person	Patrick Caffery,	James Healey,	Michael Henry,	David Jones,	Mathew Fitzimons,	Joseph Thomas	Michael Ciezwiski,	James McGninnis,	Laud Larenis,	
Date of acvident	Jan. 1	15	21	March 4	20	April 21	May 12	16	June 2	

4 2 +	9	-d =+ 2	% I & 4	7 24	1 4 1	v v	Tile itsai	7 55		r . s
The time	at th	whice whice nat had habore t wa	r wa	shot Shot	1 2 2 4 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1			a de w		in ai i hin i wa
By fall of roof while leading his car. The miner says he examined it a short time bravious and was of the actual on	was safe.  Was wathing between the tracks at the load of slope tor an empty trip to land.  When opposite him it became derailed.	discharging a prop that red over on him, causing a fractured skull, from which he died the next day.  By tail of each. The miner says that he and another miner warned the laborer not to go under this reof until it was	1.45	cars. Received injuries to his chest from which he died next day.  By rall of root. The forenan ordered the miner to prop or take it down a short	time previous, but he failed to do it. By fall of ree". The inducer says be warmed the latestrand to an under the root, which he other miners knew to be	dangerous. By sall of roof. While walking to an off can on the gangway to pat od in his land, a large stone [ell on him, Rilling	Dur instantly, This stear was examined the morning of the gavidion by the foreman, turbelman and miner and preparation of size, but it contained a slip that cently not be detected, and others had because The victim and others had because to plane the party to plane the contained as an exer on the plane to plane the cort and the opposite that known the cut of the cort and the opposite that is the original to be the surface of the cort was at the core was at	to look, and it can over coasins and killed him.  Ry full of coal. Actor railing to bar down Ity full of coal. When profile do look to bars it the piece. The murer do also to bars it	when the labors went under the pieces when the labors went under the pieces and it is not not not not not not not not not not	chance, was kalled instantly.  If tail of reak, While replacing an air ripe under a piece or read it fell on him, within a mannay. This read was distanted by a black.
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tawai	Susquehanna,.	Laekawanna	Lackawanta.	Lае <b>ка ж</b> аппа,	Lackawanna,.	La-kawanna	Lackawanna	Susquehanna,	Lackawanna,	nella
Lack	Susq			Lack	Lack			ž Ž		Susa
Lackawanna,   Lackawanna, .	:		Johnsons No. 1,	:	:		North End,		beggitt's Creek	Forest City, Susquehanna,
ına,	Forest City,		S.			65 2	; <del>;</del>		Ž.	13.
амал	st G	Glenwood,	Sons	North End,	Storrs No.	N. S.	h Er	1	, t	* 5
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drew	Andrew Pedro,	George Morochka,	Rubey Barron,	Charles Zukis,	Stanley Kaslowski,	John Jones,	James Coggins	Frank Sarer	Thomas Furgison.	Wm. P. Jones
29 Andrew Keeper,							-			15 W
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June		July			Aug.			Sept	Oct.	Nov.

TABLE 4-Continued.

Nature and Cause of Accident in Brief	By cars. In attempting to open his door for a trip of cars that were only six feet away, and moving very slowly, he became excited and was caught between the door and car, and was killed in-	stantly. By cars. In attempting to mount a moving trip of cars he fell under, receiving a lacerated arm, from which he died of	lock jaw on December 10.  By a fall of "bell" roof from an otherwise safe roof. Was not detected al-	though in a cross-cut.  By fall of "bell" roof in the face of his chamber that was apparently safe.	By blasting. After recharging a hole three times he returned the last time too	scott, and was annow by use brase when by the falling over a walk in a breaker. The railing had been removed on account of repairs being made at the time. He fell 32 feet.
County	Lackawanna, .	Lackawanna,.	Susquehanna,	Lackawanna,.	Lackawanna,.	Lackawanna,.
Name of Colliery	Storrs No. 1, Lackawanna,.	Johnsons No. 1,	Forest City, Susquehanna,.	Raymond,	Lackawanna,	Riverside,
Zashqro to redmuX	:		υ	23	1	:
Swobiw to Tedmuz		;	-	-	Н	-
Married or single	M.	ŵ	M.	M.	M.	M.
Aga	09	17	37	48	34	ਬ
noidsequooO	Doortender,.	Driver, 17	Laborer,	Miner, 48	Miner, 34	Watchman,   62
Nationality	Irish, Doortender,.	Polish,	Polish,	Polish,	Russian,	German,
Name of Person	James McHale,	William Becoski,	John Horosko,	Michael Conyack,	Michael Krust,	Peter Berghauser,
Date of accident	क्ष	Dec. 4	L-a	10	67	8

TABLE 5—First Anthracite District, 1903 Non-Fatal Accidents in and about the Mines

II								-		
Nature and Cause of Accident in Brief	Ly explosion of powder from a spark of bis long, webla, by wee measurem of		his arm, becomes the arm, becomes the arm, becomes the result of the cage block a piece of each bell down	the shart, striking him, causing a serious traction on the leg.  By cars. While working in the againstway he tritled to hear the confing of the trit and was some zeal between the rib.	and cars, breaking his hip.  In placific, a denoted car on the track it slewed over on the the vicinity break.	ing his bee.  By cars. He stepped in front of an empty car, that was being min mader that	sheatel. Siding on the st and his	sprained.  By fall of roof. While replacing a discharged prop a piece of reof fell on him.	breaking his leg. While examining his by fall of two.	
County	Lackawanna,.	Lackawanna, .	Lackawanna,.	Lackawanna	Lackawanna	Le kawanna	Susquehanna,.	Laekawanna,	Lackawanna	Lackawanna,.
Name of Colliery	Lackawanna,	Coal Brook,	Storrs No. 2,	Coal Brook,	Laekawanna,	Johnsons breaker,	Forest City,	Coal Breck,	Lackawanna,	Glenwood,
elgnis to Imitabil	M.	ν <u>ά</u>		M.	M.	M.	υż	vi	M.	M.
Уке	Si	91	5.7	45	<u> </u>	Ç	16	97	- OF	22
noilsagussiO	Miner,	Motor boy,	Footman,	Miner,	Miner,	Footman,	Driver,	Miner,	Miner,	Laborer,
Zationality	Polish,	.Vmerican,	American, I	American,	Polish,	Austrian,	Polish,	American,	Russian,	Italian,
Name of Person	Stanley Delura,	William Collier,	Thomas Foy,	John Pidwion,	Joseph Lukayzk,	B. zer Zerio,	Stephen Kapdowka,	Peter Qurnnan, ,	Samuel Russan,	Demetro Raco,
Jushions to statt	Jan. 7	S	6.1	55	8	Feb. 2	co	19	91	21

TABLE 5-Continued

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Nature and Cause of Accident in Brief	By blocking his car the motor picked up	Victim's leg, causing a fracture.  By cars, While the motor was pushing an empty car in a chamber it became derailed. Leg caught between cars and	motor and broken.  By cars. While riding on the bumper, his foot was caught and leg broken above	the ankle.  By a fall of roof. He was taking down roof and more came than was expected	and broke his arm.  While releasing a brake on a railway car outside, he slipped and fell on the	rail and fractured his leg.  By fall of roof in the chamber while load-	at the got on the wrong side and was	squeezed between the cars and rib. While oiling a scraper line at the breaker his clothes were caught and drew him	in, causing a badly lacerated leg.  By premature blast. Victim says he did not shorten the match, but believes it	to have been imperfect. While unhitching the rope on top of a plane he was struck by it and thrown	to the rib, breaking his arm.  By cars. While riding up a slope on a trip he fell under the cars and had two	ribs broken and received other injuries.  By cars. While riding on the bumper, the spreader caught, squeezing him between the mule and car, fracturing his shoulder.
County	Lackawanna,.	Lackawanna,.	Susquehanna,.	Lackawanna,.	Lackawanna,.	Lackawanna,.	Lackawanna,.	Lackawanna,.	Lackawanna,.	Susquehanna,.	Susquehanna,.	Lackawanna,.
Name of Colliery	Leggitt's Creek,	Leggitt's Creek,	Forest City,	Lackawanna,	Coal Brook,	Storrs No. 2,	North West,	Leggitt's Creek,	Marvine,	Clifford,	Forest City,	Storrs No. 2,
Algnis to beitteM	M.	ιή	M.	vi	υż	M.	υż	:	M.	M.	vi	vi
98V	39	18	22	21	36	36	41	16	40	28	25	13
noitaquonO	Miner,	Brakeman,	Laborer,	Laborer,	Runner,	Laborer,	Laborer,	Slate picker,	Miner,	Miner,	Laborer,	Driver,
Nationality	Polish,	American,	Slavonian,	German,	Irish,	Slavonian,	Polish,	American,	Polish,	Austrian,	Polish,	Irish,
Name of Person	Julius Smith,	John Neary,	James Casper,	William Meyers,	Mike Pender,	John Vindunski,	Nathan Mitchel,	Thomas Lewis,	William Bores,	Frank Mahutes,	Joseph Kraska,	Patrick Noone,
Date of accident	Feb. 25	27	March 12	13	25	28	29	April 11	17	27	May 13	

By fall of roof. While barring down loose roof after a blast, he was injured	about the hip.  By blasting. He shortened the squib, and landed to get to a safe place in time.	Injured about the back and leg.  By a ralling wall. While eating his lunch near the wall the concussion of	a cave-in in old works blew the wall on him and broke his arm.  By cars, While sanding the rail on a moving train, it bomped mus another trip aftered and smashed his thumb.	It was amputated.  By fall of roof. While harring it down be received injuries about the back and had one rib broken.	(By explosion of gas, While taking down some loose roof a tall disturbed a small body of gas, which was ignited by their lamps five feet away, and the place heing very low they received	~	a stall and badly lacerated his leg.  By tall of roof. While harring down a piece slot from his drill and broke his	leg about five meles above the knee.  By blasting. He tailed to get out of the way in time and was struck by flying	coal and had a log by ken. Standing in a cross-out waiting for a blast to go off he was struck by a piece of	coal that repounded, heertuling his leg. On a moving case he tried to remove a block of bunton, and had one finger	taken off.  By fall of roof. While barring down some loose roof he shipped and a piece	fell on him and broke his beg. By fall of root. While the miner was by fall to box preparing powder to take roof down the laborer west under	and had his lest broken. By fall of reof. While barriag it down it fell on him beneakine bus less	When meet the took of the shaft the leasting one indicates a maximum through the meet to the borton with such force that it throw them in various positions. Not very serrously injured.
4, Lackawanna,.	Lackawanna,.	Lackawanna,.	Susquehanna,.	Lackawanna, .	Lackawanna, . Lackawanna, . Lackawanna, .	Laekawanna,.	Susquehanna,.	Lackawanna,.	Lackawanna,.	Laekawanna,.	Laekawanna	Laekawanna, .	Lackawanna	Larekawanna. Larekawanna Larekawanna Larekawanna Larekawanna Larekawanna Larekawanna
36 M. Richmond No. 4,	Ontario,	Riverside,	Forest City,	Leggitt's Creek,	Storrs No. 1. Storrs No. 1. Storrs No. 1,	Coal Brook,	Forest City,	Lackawanna,	Storrs No. 3,	Leggitt's ('reek,	Johnsons No. 1,	Storrs No. 2,	Leggitt's ('reck,	Stoffs No. 1, St
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36	27	40	17	63	<b>4818</b>	. 15	02	00 00	1.3	6	13	83	9	5545666
Miner,	Miner,	Laborer,	Switchman,	Laborer,	Miner, Laborer, Laborer,	Laborer,	Miner,	Miner,	Miner,	Miner,	Miner,	Laborer,	Miner,	Miner, Miner, Miner, Miner, Laborer,
Hungarian,	Polish,	Italian,	American,	Welsh,	Welsh, Polish, Polish,	American,	English,	Polish,	Polish,	Welsh,	English,	American,	Welsh,	English, English, Polish, Polish, Polish,
31 John Yacub,	Jacob Trice,	John Loweina,	Benjamin Harris,	David J. Thomas,	William James, Peter Peterson, John Cohear,	Anthony Kilganon,	John Parlyn,	John Kasidar,	Anthony Baleraits,	Henry Williams,	George Kell,	Thomas Griffiths,	John Reese,	Edgur Weber, Jannes Weber, Anthony Rubef, Georgee Verbeski, Chas, Murishoffski, Stanley Swartz,
31	6.3	s.	13	3	54 51 51	Ξ	음	ŝł	21	રો	n	જ્ઞ	31	
	June				July									.vug.

TABLE 5-Continued

Nature and Cause of Accident in Brief	By fall of rock. Immediately on returning to the late to make an examination	breaking his leg.  By fall of roof. While barring down a piece fell on him, injuring his back and.	shoulder.  By cars, In running the car from his chamber the drag was not released and	the car was thrown on to the victim, breaking his leg-through and the dropping out of a bolt. By cars. By the dropping out of a bolt, an empty car entered the chites bread an empty car entered the chites bread and the c	store of its truck and struck the victim, irracturing his skull.  By fall of roof. He and the miner failed to get down a bad piece of roof. They	started to work under it when it fell, recturing his skull.  By fall of roof in his chamber, he re-	ceived a badly lacerated arm.  By cars. While walking alongside a moving trip of cars a prop fell off the truck	and caught his toot against the pillar, bruising instep.  By fall of roof. While replacing a discharged brob he received several outs.	about the body.  By fall of roof in chamber while drilling a hole. He knew this roof to be usually	bad, but failed to take it down. His bark was broken.  By fall of roof that he thought to be safe.  Leg broken.
County	Lackawanna,.	Lackawanna,	Lackawanna,.	Lackawanna,.	Lackawanna,.	Susquehanna,.	Lackawanna,.	Lackawanna,.	Lackawanna,.	Lackawanna,.
Name of Colliery	Coal Brook,	Storrs No. 3,	Storrs No. 1,	Leggitt's Creek,	Leggitt's Creek,	Forest City,	Marvine,	Marvine,	Johnsons No. 2,	Storrs No. 3, Lackawanna,
elgnis to beittist	M.	M.	M.	υi	M.	M.	υi	υż	M.	υż
Age.	.65	45	24	15	35		67	27	31	27
Occupation	Miner,	Miner,	Miner,	Driver,	Laborer,	Laborer,	Pump runner,.	Laborer,	Miner,	Miner,
Nationality	American,	Irish,	Polish,	American,	Polish,	Austrian,	American,	Polish,	Polish,	Welsh,
Name of Person	Henry Loftus,	Patrick Gallagher,	George Kudock,	Joseph Kearney,	Joseph Dumifski,	John Fabine,	Michael Kenshan,	William Olkna,	John Kozloski,	Richard Arscott,
Date of accident	Aug. 6	19	83	Sept. 1	~	ct	∞	15	23	58

By fall of roof that he had failed to bar down. He started to work under it	When it fell on him, breaking two ribs. By fell of roof. In leaning against a prop in a chamber he disturbed some had roof that fell on him, fracturing has been as the fell on him, fracturing	By all of reach Injured about the head, nock and back	By the many constraints to a strong to a head black one of the or his fact in incincing it	By cears. In attempting to pass an empty car, in motion he was squeezed and had	three ribs broken. By fall or roof that was apparently safe. Indused obsert the book	While unbending rath from an outside	By a fall of roof that by knew to be lad	While thawing a stick of allas with a	land it expressed, the three his anknow. In stephying the field, indexing his hip and in a shart he fell, invaring his hip and	breaking two ribs  By cars, While sidehitching, the spreader caught, throwing a car over on life beg	and measure it. By cars. A car became derailed while passing. Reneived compound tracture	of the teg,  By cars. While riding on the bumper with his arm on the tep rail it got caught in low rood, breaking his collar	home. By blasts, He failed to get out of the way in time and was struck by flying and belong the band to be and the band.	one end of a collar fell on him that was being lifted to position. Had two ribs,	benefit of the state of the state of an electric of an electric of an electric of the state of t
Lackawanna,.	Lackawanna,.	Lackawanna,.	Lackawanna	Susquehanna,.	Lackawanna,.	Lackawanna,.	Lackawanna,.	Lackawanna,.	Lackawanna,.	Lackawanna,.	Lackawanna,.	Susquehanna,.	Lackawanna,.	Lackawanna,.	Lackawanna,.
M.   Forest City,	Sterrs No. 1,	Marvine,	North End,	Forest City,	Storrs No. 3,	Ontario,	Lackawanna,	Coal Brook,	Ontario,	Marvine,	Coal Brook,	American, Driver, 24 M. Forest City,	25 M. North West,	Leggitt's Creek,	Storrs No. 2, Lackawanna,
M.	vi	M.	vi	vi	υż	M.	vi	ιġ	υi	υż	vi	M.	M.	M.	υż
\$	17	69	121	36	39	. 38	25	.00	39	16	ĠĨ	61		. 46	ର -
Miner,	Driver,	Miner,	Motorman,	Miner,	Laborer,	Laborer,	Minor,	Laborer,	Reck miner, .	Driver, 16	Carp'tr helper,	Driver,	Miner,	Miner,	Runner,
Polish,	American,	American,	American,	Polish,	Polish,	Slavonian,	Irish,	Italian,	Welsh,	American,	American,	American,	Polish,	Irish,	American, Runner, 20
30 Julius Galanski,	17 Barnard Gafney,	Edward Saunders,	John McGuire,	Alex. Bonkofski,	John Bogdonis,	Cosena Stowback,	John Moore,	William Spinell,	David Brown,	Patrick Nedan,	James Price,	Robert Williams,	Stanley Davitt,	Mark Moran,	24 Lincoln Morgan,
30	17	12	23	97	14	16	£21	23	¢1	es	44	21	67	83	र्दे
	Oct.				Nov.			Dec.							

#### Remarks on District

I entered upon the duties of the office June 3, 1903, having been appointed to fill the unexpired term of Mr. Edward E. Roderick, who resigned to accept the superintendency of the North End Coal Company, at Scranton, Pa.

There are 16 collieries in the district, 7 of which are gaseous and 9 non-gaseous, employing 7,825 persons inside the mines, under the daily supervision of 23 mine foremen, 17 assistants and 31 fire bosses; making a total of seventy-one persons who are in charge of the daily operation of these collieries and responsible for these 7,825 persons.

#### Accidents

Notwithstanding that the district has been so adjusted that mine inspections may be made more frequently, I regret to say that the results in regard to accidents have not been as satisfactory as might have been expected under the existing conditions.

The number of tons of coal produced per fatal accident inside in 1902 was 224,224, while in 1903 the number was only 204,980.

Of the 22 fatal accidents inside, 14 were caused by falls of roof, and investigations proved that 11, or 50 per cent., of these could have been avoided had the victims themselves used the necessary precautions.

It has also been proved that these accidents can be attributed to two general causes. First. Where the miner, after failing to bar down a suspicious piece of roof, pronounced it safe and started to work under it, when he should have either propped or blasted it down. Second. Where the miner, after firing a blast, returned to the face to work out some loose coal entirely too soon, before the smoke had time to clear away, and without making a careful examination of the roof, which the law as well as good judgment requires.

As long as the mining of coal continues it will be attended by dangers and fatalities, but it is seldom that a person is killed or seriously injured in a place that he knows to be dangerous, because he is on the alert, and takes no chances. This being the case, it may truthfully be said that the number of fatal accidents could be reduced if the employes were to use more precaution in apparently safe places.

#### Condition of the Mines

The condition of the mines in general is good, with the exception of a few places in non-gaseous mines where the ventilation could be improved by the foremen, with the use of more doors, and the employes themselves using more precaution to close them after drawing cars through the working places. The operators furnish the mechanical means to produce ventilation, and any failure to conduct it to the working faces is due to the indifference of the mine foremen.

The attention of mine foremen is called to the importance of not having two cross-cuts come opposite each other in the same chamber, except, in the face where the place is finished, as ventilation is more effective, the mine is strengthened and the expense reduced by not having the cross-cuts come opposite each other.

The use of inferior oils for illumination is to be condemned in the strongest terms as being injurious to health and a detriment to ventilation. The amount of smoke given off by lamps burning these oils is astonishing, especially in low veins, but their discontinuance cannot be looked for until the Assembly sees fit to enact laws to prohibit their use.

The condition of some mines could be made more sanitary and healthful if more attention was paid to drainage by the foremen and employes.

After making an inspection of all the workings in this district, I report them to be to the best of my knowledge and judgment, in a safe condition.

As to ventilation and drainage, I report the following:

# Hillside Coal and Iron Company

Clifford, Glenwood and Riverside, ventilation fair, drainage poor. Forest City and Raymond, ventilation good, drainage good. Johnsons and Ontario, ventilation good, drainage fair.

Elk Hill Coal and Iron Company Richmond No. 3, ventilation good, drainage fair. Richard No. 4, ventilation good, drainage good.

Delaware and Hudson Company Coalbrook and Marvine, ventilation good, drainage good. Leggitt's Creek, ventilation good, drainage fair.

Delaware, Lackawanna and Western Railroad Company Storrs, ventilation good, drainage fair.

Temple Iron Company Northwest, ventilation good, drainage good. Lackawanna, ventilation good, drainage fair.

#### North End Coal Company

North End, ventilation fair, drainage fair.

#### Improvements

The Hillside Coal and Iron Company made the following improvements at their various collieries during the year.

Clifford Shaft.—One balance plane driven 6x14 feet, 498 feet long. Extension of No. 8 plane on east side, 6x14 feet, 198 feet long.

Engine plane on west side, partly driven, 6x10 feet, 300 feet long.

Forest City Slope.—Have sunk an air shaft at the extreme south workings, 12x25 feet in depth; also a new slope to the New County vein (opened from surface) 8 feetx16feet, 250 feet long.

Forest City No. 2 shaft.—The present air shaft was continued from the Clark to the Bottom or Dunmore vein, a distance of 245 feet; size of shaft, 12 x 12 feet. The cribbing at the head was replaced at the same time with concrete.

They have also installed at their Forest City No. 2 shaft (one in the Clark Vein and one in the Bottom or Dunmore vein) two  $6\frac{1}{2}$  ton mine locomotives with cable reels attached. These motors are used in place of mules to bring the coal from the face to the passing branches, where the larger motors get the coal.

It has been the practice for years at this colliery, to use a small size locomotive, but being equipped with a trolley, they had found considerable difficulty with having to extend the trolley wires in the chambers as the places advanced, and also found it quite expensive. The later type of motors, with the reel attachments avoid the necessity of trolley wires being put up in the chambers, and are working very successfully. They are so well satisfied with it, and especially in laying out new workings, that they will endeavor to do without mule haulage altogether, as besides the other conveniences, the motors do not take up as much height as mules, and consequently they find they do not have to cut as much rock in a low vein as would otherwise be necessary.

They have also installed at No. 2 shaft one Jeansville Woodlined Compound Duplex Plunger Pump, size 18 and 28x10x18 inches, and at Clifford shaft a Scranton Steam Pump Company's Compound Duplex Plunger Pump, 18 and 28x10x18 inches; both of these throwing to the surface; and at Clifford shaft they have constructed a mule barn (inside) to accommodate about 50 mules.

### Scranton Coal Company

At their Johnsons No. 1 shaft, Priceburg, a pair of Vulcan Hoisting engines 28x48 inches has been installed.

At their Ontario Colliery the Blue Ridge shaft has been sunk from the Clark to the Dunmore vein, a distance of 90 feet, cutting 4 feet of very fine coal.

At Raymond Colliery, Archbald, a second shaft has been sunk to the Rider or New County vein, and equipped with a 22 horse power gasoline engine, driving a ten-foot fan.

#### Delaware, Lackawanna and Western Railroad Company

Storrs Mines.—An electric motor system has been installed. Four motors at Storrs No. 1. Three motors at Storrs No. 2. Two motors at Storrs No. 3.

Also two generators to furnish power for Storrs Nos. 1 and 2, and one generator at Storrs No. 3.

A washery annex, with a capacity of 500 tons daily.

Also three steel towers, one each at Storrs Nos. 1, 2 and 3.

#### Mine Foremen's Examinations

The annual mine foremen and assistant mine foremen's examinations were held at Carbondale, October 8 and 9. Thirty-seven persons were recommended for mine foremen's certificates, and 24 for assistant mine foremen's certificates.

#### Mine Foremen

George Smith, Wm. E. Lewis, Aneirin L. Morgan, Joseph A. Scharar, Wm. Pugh, George Imes, Thomas Lewis, David J. Llewellyn, Evan H. Evans, David G. Thomas, Edward Lewis, John Sirwatka, Theobald Field, Gomer Parry, James Jones, Benjamin F. Bowen, David S. Jones, Patrick Parks, Solomon Jones, Patrick J. O'Hara, Walter H. Vizzeard, John Morgan, John Moore, Patk. B. Gilmartin, John H. Bexon, David A. Beynon, Thomas C. Harvey, Ivor E. Davies, Patk. J. McAndrew, George E. Maxey, Charles Richards, John J. Renshaw, Joseph Vickers, Arthur C. LaMonte, Thomas Haddock, George C. Knight, Thomas Sullivan.

#### Assistant Mine Foremen

William D. Johns, George Evans, John T. Watkins, David Parry, Charles J. Arnold, Philip W. Foster, John V. Fadden, Thomas Woods, Röbert Reid, Wm. Rooke, Edward Reid, Thomas Robinson, Wm. P. Kelly, John Elderkin, Joseph Rafferty, David J. Davies, Wm. I. Richards, Thomas Taylor, Wm. J. Williams, Wm. Miles, John F. Jones, Jacob Evans, William A. Stephens, Wm. J. Davies.



# Second Anthracite District

LACKAWANNA AND WAYNE COUNTIES

Carbondale, Pa., March 1, 1904.

Hon. James E. Roderick, Chief of Department of Mines:

Sir: I have the honor to submit herewith my first annual report as Inspector of Mines for the Second Anthracite District for the year ending December 31, 1903.

Accompanying the report will be found the usual tables of statistics and some remarks that may be of interest concerning improvements made during the year, causes of accidents, flooding of mines, mining as compared with other occupations, inrush of sand and water, ventilation, drainage and safety of the mines.

Respectfully submitted,

P. J. MOORE, Inspector.

# Second Anthracite District, 1903

#### SUMMARY OF STATISTICS

Number of mines in district,	52
Number of mines in operation,	52
Number of tons of coal produced,	4,252,323
Number of tons shipped to market,	3,921,315
Number of tons sold at mines to local trade,	$42,\!596$
Number of tons consumed at mines in generating steam	
and heat,	288,412
Number of persons employed inside the mines,	6,935
Number of persons employed outside,	$2,\!487$
Number of fatal accidents inside the mines,	30
Number of tons produced for each fatal accident inside,	141,744
Number of persons employed per fatal accident inside,	231
Number of fatal accidents outside,	3
Number of persons employed per fatal accident outside,	829
Number of wives made widows by fatal accidents,	14
Number of children orphaned by fatal accidents,	37
Number of non-fatal accidents inside of mines,	75
Number of persons employed per non-fatal accident inside,	92
Number of non-fatal accidents outside,	5
Number of persons employed per non-fatal accident out-	
side,	497
Number of steam locomotives used inside,	7
Number of compressed air locomotives used inside,	6
Number of electric motors used inside,	3
Number of fans used for ventilation,	27
Number of furnaces used for ventilation,	1.
Number of gaseous mines in operation,	. 7
Number of non-gaseous mines in operation,	45
Number of new mines opened,	5
Number of old mines abandoned	2

# TABLE A.—Second Anthracite District, 1903

# PRODUCTION OF COAL

Names of Companies	Tons
Delaware and Hudson Company,	2,046,636
Carney and Brown Coal Company,	68,190
Dolph Coal Company, Limited,	215,329
Pennsylvania Coal Company,	450,862
Hillside Coal and Iron Company,	$213,\!461$
Price Pancoast Coal Company,	491,698
Edgerton Coal Company,	137,630
Sterrick Creek Coal Company,	353,598
Black Diamond Coal Company,	55,065
Moosic Mountain Coal Company,	119,213
Mount Jessup Coal Company, Limited,	98,541
Finn Coal Company,	2,100
Total,	4,252,323
Production by Counties	
Lackawanna,	4,190,810
Wayne,	61,513
Total,	4,252,323

TABLE B.—Second Anthracite District, 1903

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oduced per accident; number of persons employed; number employed per accident	
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of tons o	
dents; number o	
l non-fatal accidents;	
Fatal and	

	Number of employes ou per fatal accident Number of employes ou per non-fatal accident	568 455 202 202 829 487	
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sə	Total number of employ	4, 584 144 144 2655 2655 2655 2655 2655 2656 2656 26	
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ф	Number of employes insi	3,447 158 158 161 210 230 163 357 707 69 69 69 69 69 69 69 69 69 69 69 69 69	
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per	besuborq face to anoT ebiani inspissa fatat	157, 484 137, 630 49, 270 119, 213 119, 213 80, 172 68, 192 68, 193 85, 577	
dents	IntoT	8	
Non-Fatal Accidents	əbistuO	4 1 10	-
Non-Fa	əbizuI	8 8 8 4 C L & L 4 10 13	
	Total		
Fatal Accidents	əbistuO	o1 ←	
Fatal	əpisuI	E HOLL HICHS	
	Names of Companies	Delaware and Hudson Co., Black Diamond Coal Co., Mt. Lessup Coal Co., Mooste Mt. Coal Co., Sterrick Creek Coal Co., Price-Pancoast Coal Co., Price-Pancoast Coal Co., Cannay Vania Coal Co., Hillside Coal and Iron Co., Totals and averages for district,	

TABLE C.—Second Anthracite District, 1903

Classification of Fatal Accidents

			1	
		Intot bantD	44 HODEHOOO	2 23
		Total outside		- 00
S		Miscellaneous causes		
Min		Eg. baller explosions		
Outside of Mines		nothrouns 24		
Outs		нуу эниерішеку		
		sate A(1		- 0
		obisai Isto).	चित्र   चार्च च च का 00 1   च	30
		yistellancous causes		
	-			
		Safforated by coal, etc.		
		selum v(I		
		esimethad ta bedami		
	Into	Manways, breasts, etc.		
m oi	By Falling Into	səd-13		
Min	By F	shafts	-       -	64
Inside of Mines		1)) मुश्रस्त्र etc.	- i - i - i - i - i - i - i - i - i - i	60
Ins		elimenth bas tehnod	H	63
		Sin thered by gas		
		sng to noisoldre va		
		1.7 mine ears	H-  -    -    -    -    -    -	LO.
	- -	100SI -	g : == 01=315453 : 03	16
	By Falls of	Slate		
	By F	fgo')		-
				-
			January, Rebruary, March, March, May, June, July, Seltumber, Seltumber, Novetober, Novetober,	Totals,
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			ary,  1,  1,  1,  1,  1,  1,  1,  1,  1,	Potal
			anua arch arch pril, ay, ine, ily, ugus ctobd	
			FERERARAGE	

TABLE D.—Second Anthracite District, 1903 Classification of Non-Fatal Accidents

		Istot bust	9411040F-900000	8
		Total outside		ಬ
<b>8</b>		Miscellaneous causes		
Outside of Mines		By boiler explosions		:
side o		By suffocation		
Out		By machinery		
		By cars		4
		ebizni IstoT	ಿ≉ಟ್⊙4೪೧ <b>೧</b> ೮೮೮೮	75
		Miscellaneous causes	0	9
		Suffocated by coal, etc.		
		Ey mules		
		Crashed at batteries		
es	Into	Manways, breasts, etc.		-
Inside of Mines	By Falling Into	SJobes		
side o	By F	Shafts		
In		By blasts, etc.		10
		Powder and dynamite	674	10
		Smothered by gas		
		By explosion of gas		
		By mine cars	H00 01HH H00H	133
	of	Roof	01 @401@10000H H	88
	By Falls of	ejsig		
	By	Coal		ro
			January, February, March, March, May, June, June, July, September October, November,	Totals,

Occupations of Persons Killed or Fatally Injured Inside and Outside the Mines TABLE É.—Second Anthracite District, 1903

	Grand total	44 00 00 00 00 00 00 00 00 00 00 00
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	segoldno tadio IIA	
	Book-keepers and clorks	
	class (main)	
Outside	Slate pickers (beys)	
Out	nement but steaden	
	saotaoqueo Sas editimedoeff	
	nemerol ebizino	
	sinebneiniequS	
	obizai IstoT	44 H04H4001 4 0
	All other employes	
	Company men	
	Tempinen T	н
	Door-boys and helpers	н
Inside	Privers and runners	H 0) :11 : (0
П	Miners' laborers	ee
	Miners	0 :=== 0 : 0 0
	Fire lesses and assistants	
	nomorol onim Instalast	
	Memerol gaill	
		January, Rebruary, Anarch, Anarch, Aptil, May, Juns, Juns, August, Sequember, November, December, Totals,

TABLE F.—Second Anthracite District, 1903 Occupations of Persons Injured Inside and Outside the Mines

	Grand total	00 00 00 00 00 00 00 00 00 00 00 00 00
	Total outside	
Outside	All other employes	cd H co
	Book-keepers and clerks	
	Slate pickers (men)	
	Slate pickers (boys)	
	Engineers and firemen	
	Blacksmiths and carpenters	
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	shaebnataniaequs	
		9411 946 99 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
	All other employes	60 11 60
	Сотрану теп	
	Битртел	
A)	Door-boys and helpers	H - 00
Inside	Drivers and runners	H HHM HMH 6
	Sterofal 'steriM	61 : D46)40]200 : 01H   N
	Miners	000000000000000000000000000000000000000
	Fire bosses and assistants	
	Assistant mine foremen	
	Mine foremen	
		January, February March, Mayl Mayl June, July Selvlember, December, December,

TABLE G.—Second Anthracite District, 1903

Nationality of Persons Killed or Fatally Injured Inside and Outside the Mines

	п								
	America	English	Welsh	Irish	Polish	Italian	Austrian	Russian	Totals
January, February, March	3				1		1		4 4
April, May, June,	1			1 1		1		1	1 3 5
July, August, September, October	1	1	1			1	1	1 1	3 5 3
November, December,									5

TABLE H.—Second Anthracite District, 1903

Nationality of Persons Injured Inside and Outside the Mines

	American	English	Welsh	Irish	German	Polish	Hungarian	italian	Slavonian	Austrian	Russian	Totale
January, February, March, April, May, June, July, August, September, October, November, December, Totals,	1 1 3 4 1 3 2 1 2 1 1 1	1 1 1 1 1 1 1 7	1	1 1 1 2 1 1 1 7	1 1 1 3	2 4 1 1 3 1	1 1 3	1 1 1 1 1 2  9	2 1 2 2 3 8	1 1 3	1 1 5	6 4 11 9 4 9 7 6 10 3 5 6 - 80

TABLE I.—Second Anthracite District, 1903

Operators and mines, kind of openings, type and size of fans, size of furnaces, volume of air produced by fan or furnace perminute, number of splits of air currents, number of persons employed inside, and quantity of air produced for each employe per minute

Average number of cubic feet for minute provided for each person	910 810 810 810 810 810 810 810 810 810 8
Number of persons employed inside	12. 12. 12. 12. 12. 12. 12. 12. 12. 12.
Tog 1991 bidno to redmuN -Juo in ino Aniseng similar 191	84 133 86 14 15 15 15 15 15 15 15 15 15 15 15 15 15
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Power used	Steam Gasoline, Gasoline, Gasoline, Steam Steam Steam Steam Steam Steam Steam Steam Steam Steam Steam
nal to smeN	Guibal. Guibal. Guibal. Guibal. Guibal. Guibal. Guibal. Guibal.
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Number of revolutions per minute	0.00
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bus feet in teets and additional and	4441 64 127 127 127 12 12 12 12 12 12 12 12 12 12 12 12 12
Diameter of fan in feet	<u> </u>
Method of ventilation	Fan. Fan. Fan. Natural, Fan. Natural, Fan. Natural, Fan. Natural, Fan. Fan. Fan. Fan. Fan. Fan. Fan. Fan.
Gaseous of non-gaseous	Non-gas. Non-gas. Non-gas. Non-gas. Non-gas. Non-gas. Non-gas. Non-gas. Non-gas. Non-gas. Non-gas. Non-gas. Non-gas. Non-gas. Non-gas. Observas. Non-gas. Observas. Observas. Observas. Observas. Non-gas.
Kind of opening	Slope.  Stope.  Stope.  Stope.  Stope.  Prift and Slope.  Prift.  Slope.  Shalt.
Names of Operators and Mines	Delaware and Hudson Co. Clinton, River Side. Clinton, Briver Side. Clinton, Durmore vein, No. 1, Carlondale, No. 1, Carlondale, Powdenty, Powdenty, Powdenty, Powdenty, Powdenty, Company, Compa

			_	0						
381	227	255	317	215			198	315		122
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21,000	18,000	74,145	104, 600 Se, 760	71,129	43,394	44,000	71,300	23,800	26,892	34,420
16,000	10, 000	59,205		89, 806 85, 120	37,755	44,000	35, 50	19,500	22,018	21, 43)
20,000	16,000	69,602	102,815			37,000	60,300 15,800			32, 850 52, 000
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Steam,		Steam	Ste	Steam,	Steam,	Steam,	Steam,	Steam,		Steam,
Guibal,		Guibal,	Guibal,	Guibal,	Guibal,	Guibal,	Guibal,	Guibal,		Guibal Guibal,
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Fan,	Natural,	Fan and	Fan,	Fan,	Fan,	Fan,	Fan,	Fan, Natural,	Natural,	Fan,
Non-gas. Non-gas.	Non-gas.	Non-gas.	Gaseous, Non-gas.	Non-gas. Non-gas.	Non-gas. Non-gas.	Non-gas.	Non-gas. Gaseous,	Non-gas.	Non-gas.	Non-gas. Gaseous,
Drift,	Drift,	Tunnel &	Shalt,	Shaft, Drift,	Slope,	Shaft &	Slope,	Slope,	Shart	Shaft Tunnel,
Black Diamond Coal Co. Black Diamond, Black Diamond,	Finn Coal Co.	Pennsylvania Coal (%). 2 shaft,	No. 1 shuft, Gipsy Grove,	Hillside Ceal and Iron Co. Erie, Keystone	Dolyh Coal Co., Limited. Hannabel. Dolph.	Moosic Mt. Coal Co.	Mt. Jessup Coal Co., Limited. Mt. Jessup No. 3, Mt. Jessup No. 1,	Edgerton Coal Co. Edgerton.	Carney and Brown Coal Co.	Sterrick (val (o. Sterrick Sterrick Creek,

†Robbing pillars; air not measured.

TABLE 1.—Second Anthracite District, 1903 Operators, Location of Collieries, Railroads, Etc.

Railroad to Mine	Delaware and Hudson Delaware and Hudson Delaware and Hudson Delaware and Hudson Lelaware and Hudson Delaware and Hudson Delaware and Hudson Delaware and Hudson	D. and H. and Erie	D. and H. and Erie	Ontario and Western Ontario and Western	Erie Brie Erie	Erie Erie	D., L. and W.	Brie Brie	D., L. & W., and Erie and O. & W., and O. & W.,
P. O. Address	Scranton, Scranton, Scranton,	Carbondale,	Olyphant,	Throop, Throop,	Dunmore, Dunmore, Duemore,	Mayfield, Mayfield,	Dunmore,		
Name of Superin- tendent	J. L. Atherton, J. L. Atherton, J. L. Atherton,	J. White,	Joseph Recse,	Joseph Birtley,	W. P. Jennings, W. P. Jennings, W. P. Jennings,	John F. Gallagher, John F. Gallagher,	Thos. Mullen,		
P. O. Address	Scranton. Scranton. Scranton. Scranton. Scranton. Scranton. Scranton. Scranton.	Jermyn,	Jermyn,	Seranten,	Scranton, Scranton, Scranton,	Dunmere,	Dunmore,	Scranton,	Winton
Name of General Superintendent	CCCCC Rose Rose Rose Rose Rose Rose Rose CCCC Rose CCCC Rose CCCC Rose CCCC Rose CCCC Rose CCCC Rose	F. Hemmmelright,.	F. Hemmmelright,.	John R. Bryden, John R. Bryden,	W. A. May. W. A. May. W. A. May.	V. T. Peterson, V. T. Peterson,	John Carney,	W. G. Robertson,	Chas. P. Ford,
County	Lackawanna, Lackawanna, Lackawanna, Lackawanna, Lackawanna, Lackawanna, Lackawanna, Lackawanna, Lackawanna, Lackawanna,	Lackawanna,.	Lackawanna,.	Lackawanna,. Lackawanna,.	Lackawanna,. Lackawanna,. Lackawanna,.	Lackawanna,.	Lackawanna,.	Lackawanna,. Lackawanna,.	Lackawanna Lackawanna,.
Names of Operators and Collieries	Delaware and Iludson Co. Eddy Creek, Olyphant and washery Glassy Island washery, White Oak, Powderly, No. 1. No. 1. No. 1. Kacket Brook washery,	Edgerton Coal Co.	Sterrick Creek Coal Co. Sterrick Creek,	Price-Pancoast Coal Co. Pancoast, Pancoast washery,	Pennsylvania Coal Co. Gipsy Grove, No. 1. No. 1 washery,	Hillside Coal and Iron Co. Erie and washery,	Carney and Brown Coal Co. Murray,	Dolph Coal Co., Limited. Dolph, Dolph washery.	Mt. Jessup Coal Co., Limited. Mt. Jessup

rie			
Moosic M. Coal Co. Lackawanna, C.S. P. Ford, Winton,	Lackawanna, W. G. Thomas, West Pittston, G. J. Thomas, Carbondale, 'untario and Western.	Finn Coal Co. Lackawanna. N M. Finn,   Seranton, N. 1. Reichards Carbondale, Ontario and Western.	
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P. F.	Треп	. Finn	
\$	17 G.	77	
nna,	nna,.	nma	
ckawa	ckawa	гкама	
La	La	La	
.0	Co.		
Moosie Mt. Coal Co.	Black Diamond Coal	1 00.	
Mt.	iamon ond, .	Finn Coal Co.	
Moosic	lack D Diam	Fire to	
Moosic	Black Diamond Coal (	Barton	

TABLE 2.—Second Anthracite District, 1903

Number of tons of coal mined in each colliery, number of days worked, number of persons employed, number killed and injured, number of kegs of powder used, etc.

Number of horses and mules	#86447878 44989 #8787878 44989	412	412
Number of pounds of dynamite	46,025 5,075 7,735 18,416 18,436 3,815 5,815 5,815 5,808	95, 678	95,078
Number of kegs of powder used	16,376 3,998 4,054 8,294 8,294 3,696 110,209 112,201 12,458	67.066	1,834
Number of non-tatal accidents	<b>000000</b>	36	36
Number of fatal accidents	70 to to to 10 to	15	15
Number of employes	427 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8	4,508 82 43 81	4,584
Number of days worked	2015 2015 2015 2015 2015 2015 2015 2015	212 184 198	226
Total production of coal in tons	369, S51 91, 318 71, 723 338, 710 176, 392 44, 602 488, 936 272, 138	1,848,620 63,464 134,552 198,016	2,046,636
Number of tons sold to local trade and used by employes.	1,976 5,741 1,415 6,916	16,168	16,168
Number of tons used for steam and heat at collieries	15, 210 15, 906 12, 906 16, 8% 8 8, 8, 8, 8 64, 358 11, 216	142,808 4,800 3,500 8,300	151,108
Number of tons of coal shipped by Tsil or otherwise	352, 665 75, 412 75, 412 316, 813 316, 813 171, 719 41, 019 41, 019 200, 802	1, 689, 644 58, 664 131, 052 189, 716	58,702
County	Lack. & Wayne Lackawanna, Lackawanna, Lackawanna, Lackawanna, Lackawanna, Lackawanna, Lackawanna, Lackawanna, Lackawanna,	Lackawanna, . Lackawanna, .	Lackawanna, .
Names of Operators and Collieries	Clinton, Delaware and Hudson Co. Clinton, No. 1 Carbondale, Powderly, Jernayn, No. 2 Powderly, No. 2 Oyphant, No. 2 Gyphant, Grassy Island shuft and slope,*	Grassy Island washery,	Totals, Carney and Brown Coal Co.
	Ounty  Number of tons of coal shipped and heat at collieries  Number of tons sold to local trade and used by employes.  Total production of coal in tons  Number of tatal accidents  Number of tatal accidents  Number of tatal accidents  Number of non-tatal accidents  Number of non-tatal accidents  Number of pounds of dynamite	Hudson Co.  Lackawanna.  Lackaw	Hudson Co.   Lack & Wayne   Lack &

\*Production included in No. 2 Olyphant, †Totals in this column are averages.

# TABLE 2-Recapitulation

	8284108001400B	
Number of horses and mules	111 100 100 100 100 100 100 100 100 100	961
Number of pounds of dynamite	95, 078 3, 400 5, 506 13, 100 30, 575 700 23, 664 1, 600 1, 600	178, 265
Number of kegs of powder used	67 966 1.534 1.534 7.723 1.9116 1.81	144,925
Number of non-fatal accidents	#4010pm 4000	SO
Number of fatal accidents		33
Number of employes	4,534 1001 1001 5539 974 974 22,635 129,73 144 144	9,422
Number of days worked (not in- cluding washeries)	233 218 218 218 243 219 119 119 120 100	203
Total production of coal in tons	2, 046, 636 68, 130 215, 329 213, 471 450, 882 481, 688 19, 541 119, 213 1197, 630 338, 538 53, 538 53, 100 53, 100 54, 100 56,	4,252,323
Number of tons sold to local seed to blos and trade and base part	16, 168 1, 681 1,	42,596
Mumber of tons used for steam and heat at collieries	25.080 25.080 25.080 25.080 25.080 25.080 26.080 26.080 26.080 26.080 26.080 26.080 26.080 26.080 26.080	288,412
Number of tons of coal shipped	1, 879, 360 58, 703 189, 574 197, 825 463, 096 72, 505 11, 613 130, 150 832, 280 4, 532 1, 000	3,921,315
County	Lack. & Wayne Lackawanna. Lackawanna. Lackawanna. Lackawanna. Lackawanna. Lackawanna. Lackawanna. Lackawanna. Lackawanna. Lackawanna. Lackawanna.	
Names of Operators and Collieries	Delaware and Hudson Co., Carney and Brown Coal Co, Dolph Coal Co. Limited, Hiliside Coal and Iron Co., Pennsylvania (val Co., Mr. Jessup Coal Co., Mt. Jessup Coal Co., Edgerton Coal Co., Edgerton Coal Co., Branck Creek Coal Co., Flank Coal Co.,	Totals,

# TABLE 2-Continued

		: : : : : : : : : : : : : : : : : : :	60	::	:	60	: :	63
	Number of air compressors							
	Number of electric dynamos		63	-	1	50		61
esel.	Quantity delivered to sur	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	19,750			19,750		300
əşnu	im req sallons in therefol	25.000 25.0000 25.000 25.000 25.000 25.000 25.000 25.000 25.000 25.000 25.0000 25.000 25.000 25.000 25.000 25.000 25.000 25.000 25.000 25.0000 25.000 25.000 25.000 25.000 25.000 25.000 25.000 25.000 25.0000 25.000 25.000 25.000 25.000 25.000 25.000 25.000 25.000 25.0000 25.000 25.000 25.000 25.000 25.000 25.000 25.000 25.000 25.0000 25.000 25.000 25.000 25.000 25.000 25.000 25.000 25.000 25.0000 25.000 25.000 25.000 25.000 25.000 25.000 25.000 25.000 25.0000 25.000 25.000 25.000 25.000 25.000 25.000 25.000 25.000 25.0000 25.000 25.000 25.000 25.000 25.000 25.000 25.000 25.000 25.0000 25.000 25.000 25.000 25.000 25.000 25.000 25.000 25.000 25.0000 25.000 25.000 25.000 25.000 25.000 25.000 25.000 25.000 25.0000 25.000 25.000 25.000 25.000 25.000 25.000 25.000 25.000 25.0000 25.000 25.000 25.000 25.000 25.000 25.000 25.000 25.000 25.0000 25.000 25.000 25.000 25.000 25.000 25.000 25.000 25.000 25.0000 25.000 25.000 25.000 25.000 25.000 25.000 25.000 25.000 25.0000 25.000	5. 9m			25, 250		1,350
Suja	Number of pumps delive	01년00학교 낙박학	61			17		ıs
	Total horse power	820 920 920 700 81.150 11.727 1.3750	9,789	180 210	930	10, 179	115	E
[Ls ]	Number of steam engines of	277 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	100	in t~	티	113	4#	11
ves	Electric		01			ଦୀ		
Locomotives	niA	9	9			9		
Local	Steam	21-01	ia.			ro.		
	Total horse power	9 E 9 9 E 9 E 9 E 9 E 9 E 9 E 9 E 9 E 9	7,880	270	029	8,550	270	1,046
r.s	Horse power	240 800 720 770 870 2, 750	6,180	400	410	6,580	027	996
Number of Boilers	TaluduT	9 9 8 9 6 11 22 2	36	61	01	38	m	7
ımber	Horse power	98 88 88 88 88 88 88 88 88 88 88 88 88 8	1,700	67.5	1012	1,970		SO
Ž.	Instructive	- 222 0 25	2	5. I	5.	3		7
	County	Lack, & Wayne Lackawanna, Lackawanna, Lackawanna, Lackawanna, Lackawanna, Lackawanna, Lackawanna, Lackawanna,		Lackawanna			Lackawanna,.	Lackawanna
	Names of Operators and Collieries	Clinton, N. 1 Cart relative  Fowderly, White Oak, N. 2 Olyphant, Eddy Creek, Eddy Creek,		Racket Brook washery, Grassy 1-land washery,		Totals,	Carney and Brown Coal Co.	Dolph, Dolph Coal Co., Limited.

TABLE 2-Continued

	Number of air compressors			-	-		<b>1</b> -1			
S	Number of electric dynamo	61	c)			C)	2			
estej	Quantity delivered to sur per minute—gallons	3,480	3,480	1,3:0	1,764	0008	800	1,400	(V) L	
əjn	nim 19q snollag ni vtiosqs")	4,330	4,330	2,796	4,267	1,200	1,20	1,600	800	
Suli	Number of pumps delive	9	9	431	0.0	61	0.1	C3	©1	
	Total horse power	900	360	783 548	1,331	1,261	1,576	(97	120	588
[[B	Number of steam engines of	. 1	50	821	33	77 8	63	17	61	00
res.	Flectric	1	-							
Locomotives	TİA									
Loc	Steam				4			-	C1	4
	Total horse power	350	410	1,000	1,00	1,368	1,368	1,440	350	704
rs	Horse power			1,600	1,000	1,368	1,368	1,200	100	260
of Boilers	TsluduT			4	2	8	S	12	2	60
Number of	Horse power	320	410						250	444
ž	Issirbnify")	F. 6.	e)	*	:	+	1:1	15	10	13
	County	Lackawanna,.		Lackawanna,.		Lackawanna,.		Lackawanna,.	Lackawanna,.	Lackawanna,.
	Names of Operators and Collieries	Erie, Hillside Coal and Iron Co. Keystone,	Totals,	Pennsylvania Coal Co. No. 1 colliery. Gipsy Gröve colliery,	Totals,	Price-Pancoast Coal Co. Pancoast sha't, Pancoast washery,	Totals,	Mt. Jessup Coal Co., Limited.	Moosic Mountain Coal Co.	Edgerton, Edgerton Coal Co.

\*Steam obtained from No. 1 boiler plant. †Steam obtained from colliery plant.

67	:		6
			10
1,700		500	54 42,351 30,394 10
2,314		500	42,351
co	98		54
645 1,125 5 9 1,064 3 2,014 1,700 1 2	60 130 3 86	3, 120 1 600 500	17,105
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645	60 130 3	120   120	12,599
4	F		87
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61	00		E
Lackawanna,.	Lackawanna,.	Lackawanna,	
Sterrick Creek Coal Co. Lackawanna 12 480 4 645 1,125 5 9 1,064 3 2,314 1,706	Black Diamond Coal Co. Lackawanna, 2 3 10 1	Finn Coal Co. Larton,	Grand totals,

TABLE 2-Recapitulation

00	. 63		¬ :	: :	C3		6
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19,750	3-3	1,764	1,400	33:	1,700	200	30,394
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10,179	511 S71	1,231	1,576	82	1,064	120	17,105
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8,550	1,046	1,000	1,368	0.19 6.44	1,125	150	16,543
6,574	546 586	1,000	1,368	100	645	150	12,599
38	-1 CO	1-	s al	63 63	4-	4 01	87
1,970		410	240	250	480	2 :	3,944
3.	-7	83	121	= 65	127	• :	171
Lack. & Wayne	Lackawama	Lackawam Lackawam	Lackavanna	Lackay una	Latekay, nna,	Lackawanna	
Delaware and Hudson Co.	Carney and Brown Coal Co.	Hillside Coal and Iron Co.	Price-Pan ast Cat Co. Mount Jessen Cat Co. Elmited.	Moesic Meur, d. C. d Co.,	Star Crew Cal Co.	Fig. Cal. Co.,	Pottos,

TABLE 3.—Second Anthracite District, 1903 Number of Each Class of Employes at Each Colliery

	Grand total inside and outside	######################################	4,508		18	4,584	191	559	421
ide	Total outside	<u> </u>	1,056	32	81	1,137	83	2m2	103
Outside	All other employes	885898888888	525	1.0	25	555	14	£ .	13
loyed	Book-keepers and clerks	ee ieeesee	0	- :	7	2	-	LC	61
Eml	Slate pickers (men)	80 2-568	196	6 6	65	606	LS	13	25
Occupations of Persons Employed	Slate pickers (boys)	8 - 28 28 28 28 28 28 28 28 28 28 28 28 28	172		s	181	L-	88	- -
of P	Engineers and firmen	\$2 m 3 1 m 8 m 8	106	≎1 <del>+</del>	9	112	52	13	×
tions	Fiacksiniths and carpenters	L2 21 23 (+ 12   Λ (+ Φ	=		21	1.1	c1	=	FD.
enba	nemerol shietyn		1.		21	=		-	
Oc	Superintendents				:	: 1	-		-
	ebisni Isto'T	988888 <b>\$</b> 88	3,447			3,447	69	357	318
ide	All other employes	21 7 2 2 X	98			98		େ	4
d Ins	Company men	#8888 E88	207			202	10	15 15	<u>7</u>
ploye	Lambmen	round and	81			31		61	ୀ
ns En	I oot-peks sug pelbets	Ö⊐4मण् ∞स्म	19			8		0	LO.
Perso	Drivers and runners	834F8 SXE	Sors			Fins	12	83	49
Occupations of Persons Employed Inside	Sign is laborers	#E562 E9B	1.363			1,363	តី	18	116
i i i	srenila	<u> </u>	1,147			1,167	1 31	三	116
Oeer	Fire bosses and assistants		Ξ		: '	=!			
	nemerol enim innisissi.	20 27 21 - 21 - 27 21	15		1	<u>.</u>			
	Mine foremen		100			~	1 -1	23	-
	County	Lack, & Wayne Lackawanna, Lackawanna, Lackawanna, Lackawanna, Lackawanna, Jackawanna, Lackawanna, Lackawanna, Lackawanna,		Laekawanna,. Laekawanna,.			Laekawanna,.	Lackawanna, .	Lackawanna,.
	Names of Operators and Colleries	Delaware and Hudson (°o. Chinton.  Chinton.  Charles and Hudson (°o. Charles and Charles and Charles and Charles and Charles and Charles and Charles and Charles and Charles and Charles and Sharid and Sharid and Sharid.	Totals,	Racket Brook washery,		Totals,	Carney and Brown Coal Co.	Dolph Coal Co., Limited. Dolph,	Hillside ('oal and fron Co. Erie,

Keystone,	Laekawanna, (	: ∺	-	. 11	F	13			-71	:	87	<u>:</u>	444	21	c1	÷	61	-:	#5 -	3.1	115
Totals,		:1	:	113	1:1	1	115	21 -	3	7	4	-	21	1-	요 ' 유 '	çî 1	13	21	S I	E :	536
Pennsylvania Coal Co. No. 1 colliery, Gipsy Grox - colli-ty,	Lackewanna Lackewanna	; ;;		1 = =	및B	.e.≡	1 21/		(4 °1	5.3	35			s	E 10	5.6	#1:	্ া –	76.83	177	1 658
Totals,				á	-	- !	9,	*** <sup>1</sup>	21	To s	- 41		:3	10	2	6-	- E	00	<b>3</b> .	101	818
Price - Pancoust Coal Co. Pancoust size t. Pancoust wishery.	Lackawanna, Lackawanna,	- prof	9 :	<u> </u>	ń	¥	7.	10	H		1-			y 01	50	121-	6.	60	21.	<u> </u>	. §.a
Totals,		-		20	£1	-:	4.	-	12		( - ( -	-	21	2	77	?!	ē	1 ==	2	e.	974
Mt. Joseph Cal Co., Lio.	Laekawanna	ti.	7	· ē	1 1:		1-	Z.	ดำ		置:		-	t -	ås :	=	,	4	- 41	1 =	26.2
Moosie Meantain Coal Co.	Lackawanna.	-		) 	1-	53 1	-	co !	=		흜		-	10	100			ge	\$2	1 23	243
Edgerton,	Lackawanna, .			<b>=</b>	1 18 1	1 2	-1		1 77	E			. :	÷		A	, s.	::	- E	5.	
Sterry & Creek Coal Co.	Lackawanna	::	1	22.2	2		1 2	00	1 12		Ē.		-		. ž	: =		1 21	H	. =	7-
Black oracle 4	Lackawanna	-		1 4	a's	=	00				3.	. –	-	71	( ==	×		-	122	1 4	1
Finn Coal Co.	Laekawanna	-	:		£ !!		91	~	1 **		88			21	] **		. :	-		11	ř.
Chend t tals,		, H	5	2,508	2, 413	1,036	166		PH:	151	6,925	1.	81	- 1	3	1 1	1-	â	1,146	1-	2.1
*Callin a Mosi Muntain co	collery prepared at	t Mt.		Jessup breaker. TA	aker.	TABLE	1 - 2	-Recapitulation	tulat	ica							į				
Delay tree at 1 Hear in Cond. Conf.	Lackawanna. Lackawanna. Lackawanna. Lackawanna. Lackawanna. Lackawanna. Lackawanna. Lackawanna. Lackawanna. Lackawanna. Lackawanna. Lackawanna.	vernmeneedee 5		MAZOVE BANK B	anthe Haddalan San B	[[####발발수###요유하]] [[편]	8 10280-14800-18	# monney or   m   m	등학원회원소프라 <u>다</u> 를	9 17 5 1 1 1 1 1	보수있일상분트옵션공유의 생	ere leet leet.	<u>=</u> ===================================	과 / 플로토트 · · · 로 · · · 이 · · · · · · · · · · · ·	물기속혹음성용골라스 아지나 중	팔트로워스턴트 (주요 · 후	8 4249 - 4	Zemminaminaer 6	Nassesses   S		필요요품질립컴퓨럽(Alace   원

TABLE 3—Continued

		Totals	264 215 223	272	257 265 257	233	226	218	2r3 189	196	202	212	243
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eaker		October	15.3 17.1 21.1	11.6 18.1	13.4	14.7	14.4	12.3	10.4	11.6	10.6	10.6	18.2
h in Br	J	September	21.6 18.4 19.2	S 82 5 8.9	20.2	17	18.2	17.7	19.1	17.5	17, 16.8	16.9	22
h Mont		1suguA	22 13.3 14.3	24.1	24.3	21.4	19.2	21.7	19.7	17.7	23.1	21.8	22
ed Eacl		July	23.5 17.4 15.9	25.6	23.9	22.3	18.6	22.4	20.1	18.4	23.6	23.3	23
s Work		June	24.5 15	13.53 14.13	22.22	21.9	22	20.8	19.4	17.4	23.4	23.7	10.5
Number of Days Worked Each Month in Breaker		May	23.3	1 6 6 1 6 1 6 1 6 1 6 1 6 1 6 1 6 1 6 1	######################################	21.3	18.8	19.8	18.4	17.2	21.7	20.1	18.8
Number		lingA	24 16.3	25.7	24.9 24.9 24.0	25.5	21.6	17.9	18.2	18.1	20.9	21.1	23.5
		Матећ	22 18 18.6	27.2	1888 1888 1988 1988 1988 1988 1988 1988	13.5	18	16.91	16.3	16.8	17.3	17.3	21.2
		Rebruary	22. 22. 23. 23. 24.	17.7	25.6 25.6 25.6	23.4	20.8	20	18.7	18.3	15.6	15.9	21
		January	2.55.53	10 mm	25.8 25.8 25.8	24.7	23.1	18.7	19.4	18.7	19.7	18.9	62
	County		Lack. & Wayne Lackawanna,. Lackawanna,.	Lackawanna,. Lackawanna,.	Lackawanna,. Lackawanna,. Lackawanna,.		Lackawanna,.	Lackawanna,.	Lackawanna,		Lackawanna,.		Lackawanna,.
	Names of Operators and Collieries		Clinton, Delawers and Hudson Co. Clinton, To resembline, Poweletty.		No. 2 Copyrant, Body Creek, Grassy Island shaft and slope,	Averages,	Carney and Brown Coal Co.	Polph Ceal Co., Limited.	Erie, Willside Coal and Iron 'Co, Keystone,	Averages,	No. 1 colliery, Gipsy Grove colliery,	Averages,	Pancoast shalt,

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225		150	1	149	1	t-6.4	-	12 100	353
17.9		12	11	9.3	11	10	11	21	14.6
18.1		03		10.9		17			11.5
7.2		0.1		9.8	-	63	11		12.0
19.6	11	13.1	1	16.1		177	1		17.9
19.7		12.5		13.3	-	101	11		18.8 18.9 20.5 19.4 17.9 12.0 18
0.6		15.8	11	19.8		<u>e1</u>			61
18.4		14.1	121	19.3	-	61 61			18.9
21.5		10.4		16.8	11 - 11	2	1	:	15.8
19.2	11	t - I		15.6		22	111111111111111111111111111111111111111	56	20.5
18.5		14.0		16.6		81		7.7	10.1
- F.		10.5		15.7		16		ĉ	15.7
22.6		13.0		17.9		60		18	19.9
Lackawanna,.	1'	Laekawanna,.	11	Lackawanna,		Lackawanna,.	II	Lackawanna,	
Mt. Jessup. Coal Co. Limited.  Mt. Jessup. Coal Co. Limited.  Mt. Jessup. 25, 18,4 20 19,7 19,6 7,2 18,1 17,9 235		Edgerton ("al Co. Laekawanna", 13.3 19.5 14.8 17.3 16.4 14.1 15.8 12.5 13.1 2.3 8.2 12 150		Sterrick Creek Coal Co. Lackawanna,. 17.9 Ph. 16.6 15.6 16.8 19.3 19.3 19.2 16.1 9.8 10.9 9.7 189		Black Diamond ('Oal Co. ' Lackawanna,' 20 16 22 24 18 22 24 19 21 22 17 15 237		Frun Coal Co.  Barton,	Averages, Averages, 18.7 18.1 20.5 18.8 18.9 20.5 19.4 17.0 12.3 11.9 14.6 20.8

TABLE 3- Recapitulation

Delawates and Hudsen Co.   Larde & Wayne   24.7   29.4   29.5   11.2   21.9   21.4   17   17.7   17.8   18.5   19.5   1	តានាត់ជំតាត់ការ គឺជា	รับ
Lacks & Wayne   24.7   22.4   22.5   22.5   21.2   21.9   22.2   21.4   17   14.7     Lackswenner,   22.4   22.5   22.5   21.2   21.9   18.6   19.1     Lackswenner,   22.7   22.5   16.9   17.1   18.7   18.4   17.7   17.5   11.3     Lackswenner,   18.7   18.2   18.3   18.4   18.4   17.7   17.5   11.3     Lackswenner,   22.7   22.7   22.7   18.4   17.7   17.5   18.4     Lackswenner,   22.7   22.7   18.4   18.4   17.5   18.4     Lackswenner,   12.7   18.5   18.5   18.5   18.5   18.5     Lackswenner,   12.7   18.5   18.5   18.5   18.5     Lackswenner,   12.7   18.5   18.5   18.5   18.5     Lackswenner,   12.7   18.7   18.5   18.5   18.5     Lackswenner,   12.7   18.7   18.5   18.5   18.5     Lackswenner,   12.7   18.7   18.5   18.5     Lackswenner,   18.7   18.7   18.5   18.5     Lackswenner,   18.7   18.7   18.5   18.5     Lackswenner,   18.7   18.7   18.8     Lackswenner,   18.7   18.7   18.8     Lackswenner,   18.7   18.7   18.8     Lackswenner,   18.7   18.7   18.8     Lackswenner,   18.7   18.7     Lackswenner,   18.7	927534823453 47626 8 6	14 6
Larck & Wayn. 24.7 22.4 22.5 21.2 21.0 22.2 21.4 17. 22.4 17. 22.4 21.5 22.5 21.4 22.5 21.4 22.5 22.4 21.5 22.5 22.4 21.5 22.5 22.4 21.5 22.4 21.5 22.4 21.5 22.4 21.5 22.4 21.5 22.4 22.4 22.5 22.4 22.4 22.4 22.5 22.4 22.5 22.4 22.4		14.9
Larckawamma,   29.5   22.5   21.2   21.8   22.5   21.4   22.5   21.4   22.5   21.4   22.5   21.4   22.5   21.4   22.5   21.4   22.5   21.4   22.5	프로디트로Vr-urell 다ー하세요하하하요지	15.00
Larde & Wayn, 24.7 22, 4 22, 5 22, 21.2 21.9 22, 2 1.4 21.8 22, 2 1.4 21.8 22, 2 2.4 21.8 22, 2 2.4 21.8 22, 2 2.4 21.8 22, 2 2.4 21.8 22, 2 2.4 21.8 22, 2 2.4 21.8 22, 2 2.4 21.8 22, 2 2.4 21.8 22, 2 2.4 21.8 22, 2 2.4 21.8 22, 2 2.4 21.8 22, 2 2.4 21.8 21.8 22, 2 2.4 21.8 22, 2 2.4 21.8 22, 2 2.4 21.8 2.4 2.4 2.4 2.4 2.4 2.4 2.4 2.4 2.4 2.4		17.9
Larck. & Wayn,   24.7   29.4   29.5   21.2   21.9     Larck.wenna,   29.1   29.5   10.2     Larck.wenna,   17.7   29.   16.9   17.9     Larck.wenna,   17.7   29.   16.9   17.9     Larck.wenna,   17.8   17.8   21.1     Larck.wenna,   19.9   17.9   22.5     Larck.wenna,   19.9   19.9   19.9     Larck.wenna,   19.9   19.9   19.9     Larck.wenna,   17.9   16.5     Larck.wenna,   17.9   16.5     Larck.wenna,   18.9   16.5     Larck.wenna,   19.9     Larck.wenna		19.4
Larde & Wayn,   24.7   20.4   20.5   20.5   11.2     Lardeawenne,   27.7   20.4   15.9   17.1     Lardeawenne,   17.7   20.4   16.9   17.1     Lardeawenne,   17.7   20.4   17.2   17.3     Lardeawenne,   17.9   17.5   17.3   17.3     Lardeawenne,   27.5   17.5   17.5     Lardeawenne,   27.5   17.5   17.5     Lardeawenne,   27.5   17.5   17.5     Lardeawenne,   27.5   17.5   17.5     Lardeawenne,   27.5     Larde	######################################	20.03
Larck & Wayn, 24.7 20, 4 20, 5 20, 5 16 16 16 16 16 16 16 16 16 16 16 16 16	######################################	18.9
Lack & Wayn, 24.7 29.4 23.5 Lackwenna, 28.1 20.5 Lackwenna, 28.1 20.5 Lackwenna, 28.1 20.5 Lackwenna, 28.2 Lackwenna, 28.2 Lackwenna, 28.2 Lackwenna, 28.2 Lackwenna, 17.3 Lackwenna, 17.3 Lackwenna, 17.3 Lackwenna, 17.3 Lackwenna, 17.3 Lackwenna, 18.5 Lac	175787288 1775787288	18.8
Jack & Waxn	822728827528 824728827528	20.02
Lark, & Wayn, 24.7  Larkwanna, 28.1  Larkwanna, 17.7  Larkwanna, 18.7  Larkwanna, 29  Larkwanna, 18.8  Larkwanna, 18.8  Larkwanna, 18.8  Larkwanna, 18.8  Larkwanna, 18.8  Larkwanna, 18.8  Larkwanna, 18.8  Larkwanna, 18.8	87888888899 6 68889676	19.1
Lack, & Wayn Lackawanna. Lackawanna. Lackawanna. Lackawanna. Lackawanna. Lackawanna. Lackawanna. Lackawanna. Lackawanna. Lackawanna.	85875288558 47 65 467	
	THE TANKE OF THE TANKE	E.01
se and Huds in Co., and Bown coal Co., and in Limberl, coal and hear Co., and and the Co., and and the Co., and and the Co., and	Laoft, & Within Laoftsweimer, Laoftsweimer, Laoftsweimer, Laoftsweimer, Laoftsweimer, Laoftsweimer, Laoftsweimer, Laoftsweimer, Laoftsweimer, Laoftsweimer, Laoftsweimer,	
	n co., sell Cs.,	AVertures,

TABLE 4.—Second Anthracite District, 1903 Fatal Accidents in and about the Mines

Nature and Cause of Accident in Brief	Was thawing dynamite powder which he had placed in a powder tin, with his minns lamp under it, when it exploded and intured him fertile. He died for	uary 1s, While shoveling coal from under a piece of fire clay rock, which his laborer was	afraid to work under, he was caught by it falling upon him and killed.  Was sitting on bumper of an empty car, with one foot on the mule's spreader, and the other sliding on rail, the car jumped off the track at frog of chamber.	branch, and the mule pulled it against a prop, squeezing him between and killing him. Was loading a car of coal near the face when a piece of ton rock fell mon him.	He died February of loaded cars into the foot of slope, the rope was under the rear end of one loaded car, and litched to the drawhead of another, and while trying to unitie the rope, he placed his head between the cars. The car ahead of him jumped off and his head was souezed, killine him.
County	Lackawanna,.	Lackawanna,.	Lackawanna,.	Lackawanna,.	Lackawanna, .
Name of Colliery	White Oak,	Moosic Mountain, Lackawanna,	Pancoast,	Keystone,	Jermyn,
sundin to redunk	4	1 6 1	:		
Aga. Alguried or single.	43 M.	45 M.	16	% %	02 
noitagussO	Miner,	Miner, 4	Driver, 1	Laborer, 2	Runner, 2
Nationality	American,	Welsh,	Welsh,	Austrian,	
Name of Person	John Ritter,	David Llewellyn,	Abner Thomas,	Stephen Powlock,	William Greenslade, American,
Date of accident	Jan. 6	9	14		Feb.

Was trying to fire a blast after his billes with power home. He charged the hole with powers and tampoul it, after drawing the needle he placed a squib in the hole and janted it. This squib became extinguished before huming to the powder, and he came back and relighted it. Becaule nearly and relighted it. Becaule nearly and relighted it. Becaule nearly and relighted it. Becaule was caught they are a place of safety he was caught ly flying	coals from the shot, and fatally injured. Willed factority by failing down shuft. Was kicked in the beel by a mult; sell unblar a leaded our and was cushed, Mas dead when taken from under ear.	Killed instantly by a place of the rack rations upon him pear the face of chamber while be wasted out as should be standard by a support of	cars near the bot of a gravity plane. Killed by prematrice blast near take of	chumber. Kubel instantiy by a full of rack. He	the current while withing he poled up the more of bounds of bounds of the more need burning of the more need burning of the more need to be more than the place of the more of	prof. Joseph witer component the to with, but failed, and he to A. M. in rell then but, in failed him so that he do f when he rendeed the home.	be there we have countly by at a dedicate that was remained in the problem and in a decay was made having and in the fact her country in the law of the fall with a last the country of the last was a fact the country of the last was a fact the country of the last was a fact the last was a fact the last was a fact the last was a fact that we have the fall with a fact that we have the fall with a fact that we have the last was a	Was weeking a properties, and willow try has been competited as a properties of the beams of second and the beams of second and the beams of the bea	F. H. or instanctly by a 14th of cond from pollar whole tiving to escape it at the top peck that Lee U, sucht was also it to	We kill by a photo or possible bearing and a both or the possible bearing the pallors bearing the pallors between the backers and anisomatic bearing the pallors bearing the pallors by the photo was dankers us, but perfected to so upon it.
Lackawanna,	Lackawanna, . Lackawanna, .	Wayne,	Laekawanna,.	Laekawannu	Laokowana	Laekawanna.		Lackawanna	Laekawanna, .	Lackawanna
Edwerton,	dipsy Grove,	Clinton,	No. 2 shaft, Pa.	:		u u		Orassy Island,	Brie shaft,	сір.у своуу, ж Гаскамачна.
				:	6	•	-	:	¢1	H
÷					-				M. 1	M. 1
o 	14 40 8. 8.	13 S		21 8.	. =			15. S.	42 %	F 151
; c1	er 4			:	. =	: :			:	
Laborer, .	Driver,	Miner,	Muler,	Runner,	Minon	Headman,		Car offer.	Laborer,	Laborer,
Polish, Laborer, 20 S.	American,	Irish,		American,	45	American, Headhann,		American,   Car other	Itussian,   Laborer,	Italian, Laberer,
14 John Pallfoot,	William J. Fairfield, John Farrell,	Michael Best,		Charles Miesel,	in the state of th			Samuel Robinson,	Micheal Sisco,	Joseph Cheig,
	13	7 7	16	60 61	C	1 00		00	6	e î
		April				e constant de la cons				

TABLE 4-Continued

Nature and Cause of Accident in Brief	Was helping to put a loaded car on the track that had jumped off and discharged a prop, and while doing so, a	prese of the form ren upon min and Killed him.  While descending the shaft on a bucket, the bucket struck against a plank that was prefetching in the shaft, theowing	him of the bucket to the bottom. He was Rilfed instantly.  For runner notified this man that he was reding to run a baded car, and to block his door eyen. When he run the car the door was closed. The car smashed the door and Killed the miner almost	instantly. While in the act of standing a prop under a piece of middle rock that he was away myst meet of the of the of	chamber, it fell thom him, killing him instant!  Was picking slate off condemned cars when four loaded cars ran down against the cars he was on, and the train began to move down the track which was a	very heavy grade. He tried to jump off. and in some manner fell under and was crushed to death.  Alter fring a shot in face of headling he was barring out some of the loose ond when a piece of top rook rell.	upon him. He died September 14, Kilicd instantly by a Iall of fire clay roof while walking from the upper cross-cut along the pillar to face of chamber.
County	Lackawanna,.	Lackawanna,.	Lackawanna,.	Lackawanna,.	Lackawanna,.	Lackawanna,.	Lackawanna, .
Name of Colliery	Erie shaft,	Mt. Jessup,	No. 1 Carbondale,	Clinton, Lackawanna,.	Black Diamond, Lackawanna,	Erie shaft,	Grassy Island Lackawanna,
Marrised or single.  swobiw 10 19dmul.  znander of orphans	<u></u>	- : : : : :	M, 1 5	M. 1 '	M. 1 3 I	M. 1 6	M. 1
93A		6.3	0.2	Si.	45	38	8
noilegusso	Laborer,	Sinker, 3	Door tender, 7	Miner, 2	Outside lab. 4	Miner, 3	Laborer,
Vationality	Russian,	Welsh,	Irish,	American,	Italian,	English,	Russian,
Name of Person	John Sap,	David Morris,	Martin Harte,	Thomas L. Jones,	Joseph Pepper,	Richard Reynolds,	Andrew Barna,
Date of accident	July 3	Aug. 7	11	11	13	92	Sept. 5

Laborer, 29 S Erie shaft, Lackawanna, Killed instantly by being struck with liying coals from a shot fired in the cross-cut that was being diven from the cross-cut that was being diven from the chamber next to time. The shot	=	killing him instantly.  Was helping the tracklaver to press a rail down upon the tie when a perce of top rock tell and crushed him, killing	=	a sup and killed him.  Was motified that cars were about to be mut through the ash reon, but adjed	F	thin, figurant him byternally. He dod on his way to hespital, from a powber tim with one hand, with lemp in the other, when the powder station and he		Killed instantly, Injuned interpretily by a fall of top rock "sadelee" Kulleng him instantly. This hangened eight feet from race of chain- ber.
Lackawanna,	Lackawanna,	Lackawanna,	Lackawanna,	Laekawanna,	Lackawanna,	Lackawanna,	Lackawanna,	Lackawanna,
rie shait,	o. 2 shaft Pa. Coal Co.	S Mt. Jessup, Lackawanna,	S Eddy Creek, Lackawanna,	1 No. 2 Olyphant, Lackawanna,	S Clinton, Lackawanna,	No. 1 Carbondale,	Carney, Lackawanna,.	S
<u> </u>			<u> </u>		:	7	<del>-</del>	
. S.	. S.	61		31 M.	% %	.46 M.	40 M.	
Laborer, '	Laborer,	Pumpman, .	Laborer,	Ashman,	Laborer,	Miner, 46 M.	Miner,	Laborer,
Austrian,	Italian,	American,	American, Laborer, 26	Austrian,	Austrian, Laborer, 98	Polish,	Irish, Miner, 40 M. 1	Austrian,
9   Frank Lennia,	Antonio Masteryan, Italian, Laborer, 22 · S No. 2 shaft Pa. Lackawanna	William Harris,	Patrick Gibbons,	Andrew Chrust,	Frank Kotar,	Frank Kropinski,	Michael O'Horo,	Anthony Lesjach, Austrian, Laborer, 23
6	61	Oct. 23	96	Dec. 5	ю	10	em e	

TABLE 5.—Second Anthracite District, 1903
Non-Fatal Accidents in and about the Mines

Nature and Cause of Accident in Brief	Was working in face of chamber, beard the top crack and ran back the chamber track fifteen feet, when a piece of top rock in the form of a saddle fell between two props and caught him, causing a compound tracture of leg below the	ltnee. Was drawing a charse of powder that had missed fire and in some manner isnited the nowder. Was hurned about	the face and arms.  Was helping his miner to draw a cherze of powder which had mise of fire, when in some manner he iznified the powder.	burning him about face and arms. Was cleaning latches when the male he was driving started the cars and cought his beast thereas to what of one and	the bitch, squeezing it.  Was building a car near face of chamber, when a piece of top rock fell and slid against him, squeezing him against the	car, bruising him about the body ser- rivisty. Less bruised and cut by top coal talling on bim. Sorrezel about the body between an empty car and his door. Less bruised, baddy, by a car running off	the end of trace, and squeezing min against a lump of coal. Injured about the face and eyes by some dynamite exploding.
County	Lackawanna, .	Lаска wanna, .	Lackawanna	Lackawanna,.	Lackawanna,.	Lackawanna, . Lackawanna, . Lackawanna, .	Lackawanna, .
Name of Colliery	Frie shaft,	Moosic Mountain,	Moosie Mountain,	Powderly,	White Oak,	Jermyn,	Pancoast, Lackawanna,.
Married or single	N.	υ <u>΄</u> ,	vi.	vi	N.	M. S. II.	M.
94V	15	- 25	69	t+ 		y, 30	36
uojpalnaa()	Miner, .	Miner,	Laborer,	Driver,	Laborer,	Miner, Door be Miner,	Miner,
Vationality	English,	Italian,	Italian,	American,	German,	English, American,	Polish,
Name of Person	John Bouden,	Barto Parchoti,	Louis Carli,	Patrick Bassett,	Henry Walsh,	Thomas Smith, Wm. Hoskins, Henry Jamma,	Walter Grotconski,
Date of accident	Jan. 14	14	14	13	23	27 Feb. 6	18

	Lock, tractured by a piece of five clay rock			Body broked by a fall of top work, book are neek injured by a fall of top	Lot the turned by a call of top slate near	serious y injured about the body and	ifaata	not repty our on the N. Inch. Lines, and log injursed by a fall or evel	hear face of chamber.  Leve cut and hadded by a fall conf.	Put rece of chamber.  If p i a fured by a love of five chay rock	Tailing along thin year face of distribute. Loss strettered by eary finishe. Poot enabled by case outside.	Fractured polytic by care inside. Front crushed by a full of root in faces of	Strongs and begs himed by bring Strongs alletwee an endy our and p	e, infined by an ea, by cur	Rubs rectural and holy lemined by a	Tall and top rock year lates or church or.  Lorse and be by truted by cars, must be Know cap sold by a fall of top slate more	face of leaching.  Hip a count of and log (racetyred by a fall)	of top rock hear has a heading down to be a falling down then the bot of a title of east in his	chamber. Head end shander bruised by a fall of rock near face of enamber.
Lаскаwавиа,. Lackawaвиа,.	Lackawanna,.	Lackawanna,. Lackawanna,.	La-жаwагna,.	La kawanna La lawanna	Lackawanna,	Lackawanna,.	La-kawamna	Іл: жамаппа	Lacke wanna	Lackawanna	Lackawanna, Lackawanra,	Lackawanna Lackawanna	Гаскамакич	Laekawar na, .	Lo denwanna	Lashawanna	Lackawanna,	La-kawanna,.	Laekawanna
Mt. Jessup,	Grassy Island,	Jermyn,	Pancoast,	Drie shaft	Eddy Creek,	Edgerton,	Edgerton,	J rmyn,	Jermyn,	Grassy Island,	Unio shaft.	Grace g Island	Eddy Creek,	Eddy Crok,	No. 2 shaft, Penn.	No. 1 Carbondale	Clinton,	White Oak,	Sterrick Crock, Lackawanna.
N.S.	M.	. N.	M.	M.	M.	M.	T.	M.	M.	M.	vi vi	N.O	υż	σż	M.	N. 10	M.	K.	M.
# KG	¥3	4.3	99	13.6	50	7	81	55	21	ći.	G 1 ==	46	ŝî	( = eri	°.	. <del>5</del> ±	2	2	ŝ
Miner Laborer,	Laborer,	Slope repairer, East tender,	Door tember	Laborer,	Laborer,	Mimer,	Laberer,	Miner,	Miner.	Lab rer,	Laborer,	langer.	Asst. foreman.	Runner,	Lab rer,	Priver, Laboter,	Laborer,	Miner,	I aborer,
Itatian, Polish,	Slavonian,	American,	Hym arrivm	Russian. Slavomen.	Polish,	Polish,		And river,	English,	Russian,	Polish,	American,	Any riean,	American,	Slav nian,	American,	Austriam,	Irish,	Polish,
March 10 Victor Natopski,	Stephen Vinante,	John Meehan,	Andrew Matta,	Moh. 4 d. dwidge,	Joseph Cravochak,	Frank St klos,	George N biski,	Thos. Williams,	Wm. Cabes,	Mey. F. brzak,	Pentha Burneck,	Jartin Gallagher,	Gerrge Mason,	Edward Reberts,	Mex Islek,	John Keensh, Prank Chetch,	Jasp r Kowachie,	Patrick Lynn,	T Edward Rector,
26 th 16	Lo	56	15	รักร์โ	:3	É	₹1	ro.	::		ž ;;	6155	21	21	2.1	Z ( )	-	71	
arc									April							Mav			June

TABLE 5-Continued

Nature and Cause of Accident in Brief	Spinal column injured by a fall of top	Fock. Back and chest bruised by a piece of	coal falling and squeezing him against the car.  Lee fractured by a fell of ton rock near		of top rock near face of workings. Collar bone fractured by being squeezed	0.00 2 24	probs. back on chamber track, nity feet from face.  Leg bruised so badly that it was necessary to have it amputated, caused by a	fall of top rock near face of chamber. Stomach injured by being struck with	Head and bedy injured by a fall of top	state near tace of chamber.  Head and neck injured while cleaning a	rock falling on him. Ankle fractured by being struck with a	rope on slope. Leg fractured by a fall of top rock near	Leg fractured by falling from a beam to	the ground at breaker. Both legs fractured by a fall of middle	rock and rop coal near lace of chamber.  Leg fractured by a piece of top rock falling on him.
County	Lackawanna,.	Lackawanna,.	Lackawanna	Lackawanna		Lackawanna,.	Lackawanna,.	Lackawanna,.	Lackawanna,.	Lackawanna,.	Lackawanna,.	Lackawanna,.	Lackawanna,.	Lackawanna,.	Lackawanna, .
Name of Colliery	Powderly,	Grassy Island,	Dolah	Gipsy Grove.	heed	Erie shaft,	Moosic Mountain,	Jermyn,	Sterrick Creck,	Grassy Island,	Eddy Creek,	Carney,	No. 1 Carbondale,	Clinton,	Mt. Jessup,
Married or single,	M.	ń	×	M	υż	M.	ωi	υż	M.	M.	υż	M.	:	M.	M.
756	- 00	30	64		26	4	22	130	25	65	28	38	14	88	33
. noisequosO	Mine foreman,.	Laborer,	Miner	į.	Runner,	Miner,	Laborer,	Runner,	Miner,	Laborer,	Slope headman,	Laborer,	Slate picker,.	Miner,	Fumpman,
Vationality	American,	American,	Polich	Italian.	Slavonian,	Polish,	Slavonian,	American,	Italian,	Irish,	English,	German,	American,	Austrian,	American,
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TABLE 5-Continued.

Nature and Cause of Accident in Brief	Moosic Mountain, Lackawanna, Fractured leg and fractured pelvis by a fractured leg and fractured pelvis by a bolph
County	Lackawanna, . Lackawanna, . Lackawanna, . Lackawanna, . Lackawanna, .
Name of Colliery	M. Moosic Mountain, Lackawanna S. Sterrick Greek, Lackawanna S. Pancoast, Lackawanna M. Pancoast, Lackawanna S. Powderly, Lackawanna
Married or single	N K N N K
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noitsquooO	Miner, Brakeman, Miner, Driver, Doorman Laborer.
VillenoiinV	Slavonian, Slavonian, Polish, Hungarian,
Name of Person	Jacob Slediteski, Peter Epchick Michael Muricho Stanley Yankydu Simon Matakona Thomas Gerrity,
Date of secident	Dec. 4 10 15 15 15 18

### Accidents by Falls of Coal, Slate and Roof

There were 33 fatal and 80 non-fatal accidents reported in this district during the year 1903. By referring to Table C it can be seen that 30 or 90.9 per cent of the fatal accidents occurred inside the mines, and 3, or 9.1 per cent. outside. The number of fatal accidents from falls of coal and roof, seems to keep pace with preceding years, which is positive evidence of being the greatest danger the miner has to cope with, and really the least feared. Of the 30 fatal accidents inside the mines, 17, or nearly 57 per cent., were caused by falls of coal and roof, and upon investigation it was learned that there were 6 miners killed by this cause. Four of these accidents resulted from carelessness on the part of the victims, and 2 were unavoidable.

There were 9 laborers killed by the same cause. Six of these accidents were due to the carelessness of the miner with whom they were working, and 3 of them were accidental. There were two other accidents from the same cause, one attributed to incompetency on the part of the victim, and the other accidental. Many excellent articles have been written by mine inspectors in the past on fatal accidents from this as well as other causes, and advice has been given as a result of a lifetime experience, that if followed would no doubt have been the means of reducing the number of fatalities from this cause far below what it is. In addition to the many wise suggestions in the past to guard against dangers of this kind, I venture to state that until there are competent men employed in each mine whose duty it is to visit a certain number of working places as frequently as they can possibly do so, and direct the securing, or removing of all danger from this source, the accidents from falls of roof will not be reduced to any great extent. It may be asked, why cannot the mine foreman or his assistants attend to this? I claim without the least fear of successful contradiction that it is utterly impossible for them to do so. Their time and their various other duties will not permit them. I can truthfully state that there is not one mine in this district in which I did not have occasion to call the attention of a number of miners to the extremely dangerous condition of the roof, and have them remove the danger before I left.

Fatal accidents from this source will occur as long as coal is mined, unless the miner uses every precaution known to him, and applies the remedies suggested by others for his safety.

### By Mine Cars, Inside

There were five fatal accidents inside by mine cars, which is 16.66 per cent., of the number of fatal accidents, 40 per cent. of this

number was due to carelessness on the part of the victims, 40 per cent. was accidental, and 20 per cent. to a mistake made by the victims. I am pleased to state, that with few exceptions the officials in charge of the mines in this district, are careful to see that the roads are kept clean and free from obstacles that might be the means of causing an accident from this source. This class of employes covers large territories, and the dangers to which they are subjected are many and multiplied, for many times they run great risks, and frequently meet with accidents not attributable to themselves. The old methods of driving narrow gangways with room at intervals to pass moving cars with safety is fast giving way to the modern method which provides ample room on both sides of car, thereby reducing the danger on gangways to a minimum. Drivers and runners, as a rule, do not realize the dangers they are subjected to while performing their duties, hence they take uncalled for risks, and acquire a habit of carelessness in riding and handling cars, which frequently ends in fatal accidents, or serious injury to themselves or others. A habit prevails among drivers and runners in this district not calculated to promote health, and it should be stopped at once. I refer to their sitting on the bumpers of loaded and empty cars with one foot dragging along the rail, and the other resting upon the mules' spreader.

This habit has been condemned by the mine inspector of the old first district, and a remedy suggested, which, if applied, would be the means of reducing accidents of this kind. When it is shown that 40 per cent, of the number of fatal accidents that happened inside by mine cars for the year 1903 resulted from this cause, the recessity of enforcing strict discipline in this matter will be appreciated.

# By Blasts

The next most prolific cause of fatal accidents is by blasts, premature and otherwise. They can be prevented only by the miner and laborer exercising the precaution that is absolutely necessary on their part while engaged in preparing a charge of powder for a blast, and by giving the powder ample time to be exploded after the hole has been properly charged, sufficient alarm given to warn others, and retreating to a place of safety. Many accidents from this cause might be averted if the simple precautions were taken that are contained in the mine law. There were three fatal accidents from blasts, or 10 per cent. of the number of fatal accidents inside. Two of these happened through carelessness on the part of the victims igniting the squib, and the other one by contributory negligence on the part of the miner with whom the victim worked.

### By Dynamite and Blasting Powder

There were two fatal accidents from explosions of dynamite and blasting powder, or 6.66 per cent. of the total number inside. One of these occurred by dynamite exploding when the miner was thawing three sticks which he had placed in the lid of his powder tin under which he had placed two mining lamps. This habit exists throughout the district, where it is necessary to use this explosive, and many officials are very lax in their efforts to enforce strict compliance of the rules as laid down by the manufacturers of this explosive. In working small veins considerable dynamite is handled and used by the coal miner in blasting down the top or raising bottom to get sufficient height for the car and mule. This being the case, the miner that has occasion to use this explosive should have some knowledge of the proper method of handling and using the same with the least possible danger to himself. All frozen cartridges should be thawed, for when it is in a frozen condition is loses much of its efficiency. Its properties then change, and it is difficult to explode it with a cap. When it is in a frozen condition it should not be exposed to direct heat. The liability to accident by explosion can be reduced only by removing as far as it is possible to do so, the causes and conditions which lead to such. On account of the great importance of dynamite as an explosive in mining, and the number of accidents which happen from this source, some of which can be attributed to a lack of knowledge of handling and using this powder when in the above condition, I would suggest a strict adherence to general rules 29 and 31 of the Anthracite Mine Law, in addition to complying with the rules as laid down by the manufacturers of high explosives.

There was one fatal accident caused by removing blasting powder from a powder tin, with mining lamp not removed from the head, a spark from lamp falling into the powder resulting in an explosion, causing death to the victim. General rule 28 of the Mine Law provides a means of reducing accidents of this kind to a minimum.

Accidents from Miscellaneous Causes, Inside.

There were three fatal accidents from miscellaneous causes inside, two of which were accidental and one attributed to carelessness of the victim.

### By Mine Cars, Outside.

There were three fatal accidents from cars outside, two of these were caused by mine cars, and were found to be accidental. The other one was caused by the railroad cars near the breaker. An inquest held on this, rendered a verdict of accidental death.

In conclusion, permit me to state that the various accidents which

are happening so frequently in and about the mines, and which are the result of causes that are well known to almost every one employed about the mines, will not be reduced, excepting by the mine officials enforcing strict discipline after properly instructing those who lack the knowledge necessary to guard themselves against the many dangers that surround them while engaged at their daily toil, and by every employe exercising the utmost care and obeying the instructions that are given them by others.

### General Condition of the Mines

The mines that are operated by the Delaware and Hudson Coal Company, with few exceptions, are in good condition. The volume of air entering these mines is sufficient to insure a healthy atmosphere for each person employed. The air current is not conducted to the face of the working places in a few of these mines. The foremen in charge are making some efforts to improve the condition. The roads, drainage and general condition as to safety are good.

At the Gipsy Grove and No. 1 shaft of the Pennsylvania Coal Company the volume of air entering the mine was found to be inadequate, and steps were taken to increase the total volume. The roads and drainage are fair.

At the Pancoast shaft of the Price-Pancoast Coal Company the quantity of air was found to be insufficient to dilute the copious flow of gas transpiring from the Dunmore vein to a safe limit. The officials in charge took steps at once to increase the volume of air, and remove as far as possible all danger. My last visit found it in first class condition.

The Moosic Mountain mine of the Moosic Mountain Coal Company needs improvement to better the condition of the ventilation, roads and drainage.

The Mount Jessup Coal Company is making improvements with a view of bettering the general condition, which is very much desired.

In the Sterrick Creek mines of the Sterrick Creek Coal Company the ventilation is weak in many places, but improvements are under way with a view of changing the general condition for the better.

The general condition of the Dolph mines of the Dolph Coal Company is good, excepting the ventilation in some places, which will be remedied by changes that are contemplated.

The mines of the Hillside Coal and Iron Company were found to be lacking sufficient ventilation. The officials have taken steps to remedy this. The condition as to safety is fair.

The general condition of the smaller companies is as follows:

Carney and Brown Coal Company, fair.

Edgerton Coal Company, fair.

Finn Coal Company, good.

Black Diamond Coal Company.—This mine was in a very bad condition generally, but on my last visit I found the ventilation greatly improved.

### COLLIERY IMPROVEMENTS

### By the Delaware and Hudson Company

Clinton.—Sinking new slope from surface to Grassy vein, section 7x14 feet, present depth 125 feet.

Extension of present haulage in old slope Top vein 2,400 feet begun.

Erection of supply store 16x28 feet and office for mine foreman 14x18 feet. Installation of 3 cylinder boilers, 90 horse power total.

New local sales pockets in Carbondale City of 4,500 to 5,000 tons capacity, with elevator and conveyor driven by 26 horse power gas engine.

Carbondale No. 1.—Air shaft from surface to top vein, 151 feet, completed.

One ten foot ventilating fan driven by 26 horse power gasoline engine.

Powderly No. 2.—Erection of new breaker and washery combined. Machinery driven by one pair of 16x36 inch engines, 150 horse power. Conveyors driven by one pair of 18x36 inch engines, 90 horse power. Washery supplied with one 18x12x18 inch Jeansville Duplex pump of 1,000 gallons capacity. Installed six new return tubular boilers of 150 horse power each.

Jermyn No. 1.—One direct current generator of 180 kilowatts driven by direct connected engine. Mines wired for electric haulage, and one electric locomotive of 12 tons weight put in use. One 24x14 x36 inch Jeansville Duplex pump of 1,800 gallons capacity installed, but now under water and not being operated.

One new gravity plane 1,200 feet long. Foot of shaft, head and foot of inside slope wired and light furnished by arc lamps.

White Oak.—One 17 foot fan erected, driven by 14x36 inch engine to ventilate the Dunmore vein.

New slope sunk 500 feet in Dunmore vein.

Proposed 3,000 feet haulage road begun.

Grassy Island.—One three stage air compressor with 46x11½x5.5.8 inch diameter air cylinders, 22 iach diameter steam cylinder by 21 inch stroke, 140 horse power. One locomotive type boiler installed, 250 horse power. Three small air motors sent to this mine, but not all in use.

New Shaft.—Present depth 525 feet. Section of shaft 12x50 feet to be continued to Dunmore vein. Erection of new Guibal fan at this shaft 28x8 feet, driven by a pair of Corliss engines 18x36 inches each.

Eddy Creek.—Tunnel being driven from Rock vein to Big vein, section 7x12 feet, not completed. Four new openings located along East bank of the Lackawanna river, near Priceburg. One of these to open the Pierce vein, and three to open the Church vein. New air shaft commenced circular in shape, 14 feet diameter. One centrifugal pump of 500 gallon capacity, driven by electric motor.

Three Gardiner electric drills for coal mining put in use.

No. 2 Olyphant.—Three locomotive type boilers of 250 horse power each installed. One 22 and 38x16x48 inch Jeansville Duplex pump, capacity 3,000 gallons per minute.

One 60 K. W. electric generator belted to a 13x12 inch Ball engine.

### By the Sterrick Creek Coal Company

Sterrick Creek.—To improve the ventilation, a rock air-way was driven from the slope workings of the Dunmore vein up to the Clark vein, and two air shafts from the surface to the Clark vein were also completed. Several intake drifts from the surface to the Grassy vein have been abandoned, owing to their proximity to the Grassy Island Creek, and in their stead an air shaft, some distance away from the creek, has been sunk from the surface to said Grassy vein.

A new Jeansville pump has been placed in the Clark vein, near foot of No. 1 shaft, with a capacity of 2,000 gallons per minute.

A new lagersoff-Sergeant Duplex air compressor, 20x24 inch steam cylinder, and compound air end 33 inches and 204x24 inches was added to original air plant.

A new shaft 12x30 feet is sunk to a depth of 100 feet, to be continued until it reaches the Dunmore vein.

Three bore holes have been sunk from the surface, two to the Dunmore vein, and one to the Clark vein.

The present two inside hoisting engines, together with a large one, are to be placed on the surface, and ropes are to be run down the bore holes into the mine. This will enlarge the present capacity, eventually making this colliery one of the largest producers.

## By the Pennsylvania Coal Company

Work has been commenced at both ends of a new tunnel to be driven from the Lackawanna river to No. 1 shaft, No. 1 colliery, for

the purpose of draining all of the collieries above No. 1 shaft in the Dunmore district.

This tunnel when completed will be about 7,000 feet in length. The dimensions are as follows:

First 1,200 feet to be 8x6 feet.

The next 5,000 feet to be 15x7 feet.

The last 800 feet to be 8x6 feet.

The tunnel to be driven with a uniform grade of 4 inches in each and every 100 feet.

### By the Price-Pancoast Coal Company

Pancoast Shaft.—Erection of two new brick supply houses, one 20x30 feet and the other 20x40 feet.

The old 20 foot ventilating fan has been repaired and put in fit condition to ventilate the Dunmore vein.

In No. 1 or Diamond vein a new gravity plane has been constructed 700 feet in length.

In No. 3 vein, two new gravity planes, and in No. 4 vein two new gravity planes have been constructed. The West slope has been extended for a distance of 700 feet to line near Lackawanna river.

The Dunmore vein has been opened and a ślope driven on the north dip 1,000 feet. A hoisting engine has been put in here, capable of hoisting 200 cars per day. A slope on West side is being driven, present length 400 feet, with gangways driven east and southeast. Seven splits of air have been made with two more under way. A new barn has been made in this vein to hold 35 mules.

### By the Finn Coal Company

Erection of new breaker, dimensions of which are 51x51 feet and height over wall 65 feet. One large screen, two sets of shakers 30 feet long. One set of elevators, distance between centers 45 feet.

Breaker engine 16x24 inch cylinder, 75 horse power. Capacity of breaker about 350 tons daily.

A tunuel driven from No. 1 Dunmore to No. 2 Dunmore vein; length 66 feet, section 6x14 feet.

A new second opening was driven from inside to the surface, a distance of 100 feet.

### By the Black Diamond Coal Company

Erection of new fan, 12 feet in diameter, to ventilate No. 1 vein. The result is a marked improvement in the ventilation.

# Flooding of Mines in Carbondale District

On the 7th of October it began to rain and continued until the evening of the 9th. The Lackawanna river overflowed its banks from Carbondale to Scranton, resulting in great destruction to property along its path. At the old "pump house," in Carbondale, known as "Campbell's," there are two shafts a short distance west of the river. The tops of these shafts are but a few feet above the level of the bank of the river. Near the "pump house" the river overflowed its banks and the water poured down the shafts from early in the evening of the 8th until the following evening.

During this time millions of gallons of water poured into the mine. There were three men working night shift in a slope in No. 3 shaft at this time, and had it not been for the timely notice they received, in all probality they would have perished. As it was, they had to flee for their lives, wading through the water to their waists. Later in the evening it was learned that the river had cut a channel through the south bank near No. 1 slope, changing the course of the stream, causing it to flow down No. 1 slope in such volume that the slope was not large enough to take it. The lower levels of Nos. 1 and 3 were not long in being inundated, and the water then began to run to Powderly mine, which is connected to No. 1 mine, and operated by the same company. The water was not long in filling the ipside slope in this mine, and then began pouring in to the Erie shaft workings, the adjoining mine which is operated by the Hillside Coal and Iron Company. The water rose so rapidly in this shaft, that notwithstanding the efforts of the mine officials, the pumps were covered in a very short time. When the water had risen to a certain point in this shaft, it then flowed to the Glenwood shaft workings. which are operated by the same company.

At 3 o'clock P. M. Saturday, October 10th, the water had reached a vertical height of 40 feet in the Glenwood shaft. From this point it ran into the Jermyn No. 1 shaft. This shaft is located at Jermyn and is operated by the Delaware and Hudson Coal Company. I visited this mine October 15th, and was informed that the water was 25 feet vertically above their pumps in the inside slope.

The flooding of all of those mines emplasizes the necessity of leaving sufficient barrier pillars along the line of adjoining properties in each vein for the safety of employes, and for the benefit of the operators. Had those mines been worked in days gone by with safe barrier pillars left along adjoining properties, it would have been the means of preventing the flooding of all of those mines, which happens frequently and means enforced idleness to a great number of men and boys, and an enormous expense to the operator.

Inrush of Sand and Water into the Workings of the Eddy Creek Shaft of the Delaware and Hudson Company at Olyphant

At about 3 o'clock Friday afternoon, January 2, 1903, a cave-in occurred on one of the busiest street in Olyphant, when four buildings, including a large hotel, sunk fifty feet and were covered.

When it was learned that none of the occupants were lost, it was looked upon as almost miraculous. The large water main ran through near the center of this cave-in, and it was found that it was broken, and a large volume of water poured its way into the mine, carrying with it large quantities of sand and gravel, which caused much alarm for the safety of the men and boys employed in this part of the mine.

Fortunately, however, all the men and boys made their escape without injury, although many of them had to wade through mud and water above their waists.

On January 5th I visited this mine for the purpose of making a thorough examination of this particular part, hoping to ascertain the cause of cave-in, and to note the condition of workings, and if possible devise some means of preventing a repetition of the accident. I was met at the mine by Mr. Edward Roserick, then Mine Inspector of the First District, and after a brief consultation with the mine officials relative to the condition of the workings in this particular district, it was learned that the cave-in took place in old workings that were abandoned in 1896. The range of chambers that was affected by the wash from the cave in was opened from a gangway driven from the top of "Hoye's" plane to the head of "Moyle's" slope, a distance of about 1,800 feet. "Moyle's" slope is sunk on the north-'west dip of an "anticlinal," and "Hoye's" plane was driven on the southeast dip of same "anticlinal." The face of those chambers is on or near the apex of the "anticlinal." To reach this district it was necessary to travel from the head of "Movle's" slope toward "Hoye's" plane, and in doing so we had to travel upon hands and knees for a distance of about 500 feet. The sand and gravel came within 18 inches of the roof of gangway for this entire length, which made it extremely difficult for the men and boys employed near this district to escape.

When we reached the district in which the cave-in occurred, we found the pillars to be very uniform in width and length, and the chambers the same. Many of the chambers were filled with rock which had been taken from other parts of the mine and unloaded there for protection of the pillars and roof. There was no indication of a "squeeze," and as the rock covering over the vein is not of a cohesive nature, it will yield under much less force, and will not transmit the pressure it receives to any great distance. The pro-

bable cause is that there may have existed at this point a local "pot hole," which would increase the depth of sand and gravel and decrease the chickness of the rock covering overlying the coal seam. The props may have been decaped under this roof at this point, and owing to the great weight of sand over this shallow rock, it yielded. To guard against a repetition of the above occurrence, suggestions were made, and I am pleased to state that the officials in charge put them into effect at once.

This company has bored a number of holes along the flats in this vicinity for the purpose of establishing proof of the thickness and nature of the covering overlying the coal seams. While it does not furnish absolute security against accident, I think it is the means of reducing the number of accidents from this source to a minimum, besides the saving of many mines from complete ruin.

### Ventilation

This important subject has been given the proper attention by some of the officials in this district, and they will agree with me when I say that they have been amply rewarded for making improvements that increase the ventilation, and that conduct the current to the face of each working place. I regret to state that this very important subject, which is one of the most essential in the successful development of a mine, is given passing attention only by a great number of mine officials in this district. In many cases this cannot be attributed to a lack of knowledge of the laws governing ventila tion, but rather to a laxity on their part in allowing the ventilating currents to lag behind the working faces, until the condition of the workings becomes unendurable, and as such increases the many dangers to a great extent, and also increases the expenses of everything connected with the mining, preparing and transporting of the coal to the surface. The injury inflicted on the workmen where the above condition exists is entirely uncalled for, and cannot be too harshly condemned. It has been my experience where I found a few mines in this district operating under the above conditions that the officials in charge were invariably incompetent men. It is unpleasant to have to comment so severely, but the truth should not be hidden in such cases. To the officials mentioned it is useless to suggest a remedy that will relieve existing evils. According to the statements given in the air reports for each colliery in the district for the year 1903, the total quantity of air entering all of the mines in the district is 2,468,029 cubic feet per minute. There are 122 splits, or separate currents of air in the mines of the district, through which 1,834,362 cubic feet of air are circulating per minute. This provides for each person from 1,050 cubic feet to 184 cubic feet of air per minute.

can be seen at a glance from the above, that the volume of air entering nearly all the mines, is sufficient to render a healthy atmosphere for each and every person employed therein, provided, it is conducted in the proper manner to the face of each working place. I regret to state that the number of mines properly ventilated in this district is few, while in a number of those unsatisfactorily ventilated they are endeavoring to comply with the requirements of the law, and are quite successful in doing so. There are a few others, whose sole object seems to be to evade the requirements of the law.

### Drainage

The condition of the collieries in the Second district in respect to drainage is good in many mines, while it is fair in others. The attention given these three essentials, viz: ventilation, roads and drainage by competent officials is very noticeable. We find that they who neglect the ventilation, also neglect the roads and drainage, with the result that the expenses of mining and bringing the coal to the surface are very high, and the danger attending the various branches of labor is increased to a great extent.

### Safety of Mines

The condition of the mines as to safety is very good. The writer is not aware of any danger that is lurking in any mine in the district which would be the means of imperiling the lives of the workmen. Each and every mine in the district is reported as being free from an accumulation of explosive gases. In mines where explosive gas is evolved the ventilating currents are sufficient to dilute and render harmless the gas transpiring from the coal and strata. There are seven mines in the district in which explosive gases are found. Six of these are not considered gaseous owing to the small quantity of gas exuding from the coal and strata, nevertheless, precaution is taken to prevent any cause which very often results in disaster. There is one mine in the district in which explosive gas is liberated in large quantities. This mine is operated by the Price-Pancoast Coal Company, and the quantity of air in circulation in this mine is sufficient to render a safe and healthy atmosphere.

## Mining Compared with Other Occupations

It is impossible to compare any of the various occupations of man with that of the miner. True it is, his hours of toil and labor each day, as a rule, are exceeded by the hosts of men that are engaged in other fields of manual labor, but the conditions which surround them

while engaged in their toil are such, that there can be no comparison. It is the miner that must delve a life of labor in those deep caverns, where darkness "reigns supreme." Surrounded by impending dangers, he performs his labor with the aid of a flickering light. must have a trained eye to discover and escape those dangers that cannot be detected in any other way, such as "bells and saddles" in the roof, and explosive gas in the safety lamp. He must have a trained ear to assist him to guard against those dangers which it is impossible to see, and can be known only by sounding, such as pieces of top rock, slate or coal, which appear safe to the eve, but when sounded will indicate imminent danger. These are some of the dangers which constantly hang over the miner while he is actively engaged in his working place. In addition to these I might mention another great danger, namely, blasting powder. When we consider the quantity used for mining purposes, we will be surprised to learn that not more than 13 per cent. of the number of fatal accidents for 1902 in the anthracite district occurred from this source.

The miner very frequently meets with accidents from mine cars on gangways and slopes, and his life is in danger while ascending and descending the shaft. Those dangers are augmented in mines generating explosive gases.

Instead of using the naked light to illuminate his working place, he must substitute instead a lamp erroneously called a "safety lamp." The name given to this lamp would convey to the minds of many who are using them, that it is needless for them to use the precaution necessary on their part, while working in an atmosphere mixed with explosive gases, since the lamp is a "safety lamp." This lamp is safe only when it is in the hands of safe persons, and it was never intended to be used for the purpose of working in an atmosphere containing an explosive mixture of air and gas. Therefore, it should be ca<sup>11</sup>ed a testing lamp.

The illuminating power of those lamps compared with a candle, is from .16 to .90 depending upon the kind of lamp used. It can be seen from this how the dangers from gas are increased.

Inured to the many dangers which constantly hang over and about him, he trudges on with a light that faintly glimmers, seemingly oblivious to the presence of danger. Spurred on by earnest solicitation for the welfare of those whom he loves, he boldly advances to meet, and cope with those agents of death, that have slain thousands, whose names shall never be recorded in the pages of history. Philanthropy's voice is stilled and the sympathy extended to those committed to their care is blind to their needs. Our country cares for the widows and orphans of its sailors and soldiers, but turns a deaf ear, as it were, to the cries of the widows and orphans of the miner.

The act of April 22, A. D. 1903, "to provide a miners' home or homes for old, crippled and helpless employes of the coal mines of Pennsylvania and their wives, who have attained the age of fifty-five (55) years," is a humane act, but could not this great country provide a means of alleviating the sufferings of the widows and orphans who are permitted to live in want, and sometimes reluctantly become inmates of the poor houses? Since the real history of mine legislation, which begins with the Avondale disaster, September 6, 1869, when by the burning of the breaker over the mouth of the shaft the smoke and gases of combustion entered the mine and smoothered one hundred and eight men and boys, there has been a number of wise laws enacted for the benefit of the employer and employe, and if in the near future a law could be enacted with the above purpose in view, it would meet with the approval of the Christian world.



# Third Anthracite District

LACKAWANNA COUNTY

Scranton, Pa., February 20, 1904.

Hon, James E. Roderick, Chief of Department of Mines:

Sir: I have the honor of presenting my report as Inspector of Mines for the Third Anthracite District, for the year 1903, as provided by the act of 1901.

It contains the usual statistics. The accidents which took place during the year, and which have from time to time been reported to the Department, will be found in tabulated form.

Respectfully submitted.

H. O. PRYTHERCH,
Inspector.

# Third Anthracite District, 1903 SUMMARY OF STATISTICS

Number of mines in district,	1) "
Number of mines in operation,	2.5
Number of tons or coal produced,	4.643,514
Number of tons shipped to market	4.203.343
Number of tons sold at mines to local trade,	213,490
Number of tons consumed at mines in generating steam	
and heat,	226,681
Number of pursons employed inside the mines,	6.869
Number of persons employed outside,	2,240
Number of fatal accidents inside the mines,	26
Number of tons produced for each fatal accident inside,	178,597
Number of persons employed per fatal accident inside,	264
Number of fatal accidents outside,	4
Number of persons employed per fatal accident outside,	560
Number of wives made widows by fatal accidents,	19
Number of children orphaned by fatal accidents,	49
Number of non-fatal accidents inside of mines,	79
Number of persons employed per non-fatal accident inside,	87
Number of non-fatal accidents outside,	6
Number of persons employed per non-fatal accident out-	
side,	373
Number of compressed air locomotives used inside,	3
Number of electric motors used inside,	19
Number of fars used for ventilation,	2.8
Number of gaseous mines in operation,	18
Mumber of non-gasous mines in operation,	7

### TABLE A. Third Anthraciae District, 1903

### PRODUCTION OF COAL

Names of Companies	Tons.
Delaware, Lackawanna and Western Railroad Company	2,132.111
Delaware and Hudson Company,	1.50,630
Bull's Head Coal Company,	27,316
Pennsylvania Coal Company,	202,634
A. D. and F. M. Spencer,	78,200
Nay Aug Coal Company,	$52,\!156$
Green Ridge Coal Company,	170,442
Scranton Coal Company,	1,026,862
People's Coal Company,	330,817
J. J. Gibbons,	8,950
Mountain Lake Coal Company,	4,250
Economy Light, Heat and Power Company,	49,813
-	
Total,	4.613.514
	1
Production by Counties	
Lackawanna,	4,643,514

TABLE B.—Third Anthracite District, 1903

Fatal and nen-fatal accidents; number of tons of coal produced per accident; number of persons employed; number employ d per accident

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		Name of Car paraller	Delaware, Lackiwanna and Western R. R. Co., and Marken Co., Delaware and Britson Co., Bull's Head Coal Co.  New Aux Gord Co., Green Ridge Coal Co., Eventuen Coal Co., People's Coal Co.,	Totals and wereses for district

TABLE C.—Third Anthracite District, 1903 Classification of Fatal Accidents

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		Miscellaneous causes	
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Inside		Powder and dynamite By blasts, etc.	
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		By explosion of gas	
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	By Falls of	oluk	
		Ino')	
			January, Polentary, Manch, May May May May May May May May May May

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TABLE D.—Third Anthracite District, 1903 Classification of Non-Fatal Accidents

	-	Grand total	100000000000000000000000000000000000000	\$20
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מני	*	Miscellancous causes		G1
Mine		Py beiler explosions		
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		I'A cars		44
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		Miscellanecus causes		59
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Occupations of Persons Killed or Fatally Injured Inside and Outside the Mines TABLE E.-Third Anthracite District, 1903

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	Pumpmen	
	Door-boys and helpers	
Inside	Drivers and runners	F = 15
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	Assistant mine foremen	
	Manager of the forestern	
		January, P. Grony, March, April, April, June, March

TABLE F.—Third Anthracite District, 1963 Occupations of Persons Injured Inside and Outside the Mines

	Grand total	Houra-woord	80 80
	Total outside	H H 0 HH	9
	All other employes		9
	Book-kechers and clerks		
side	Slate pickers (men).		
Outside	Slate pickers (boys)		
	Engineers and firemen		
	Blacksmiths and carpenters		
	tremerol abishuO		
	Surerintendents		
	Total inside	Housest-Feerwele	42
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	Door-boys and helpers		cl
Inside	Drivers and runners	작 · · · · · · · · · · · · · · · · · · ·	121
	Miners' laborers	eee eeooooo	15
	sanit.	61 01010100 + + 40110 00	565
	Fire bosses and assistants		¢1
	nomerol anim tantisisek.		
	Mine foremen		
		January. February March, May June June July September October November December	Totals,

### TABLE G.—Third Anthracite District, 1903

Nationality of Persons Killed or Fatally Injured Inside and Outside the Mines

	American	Postish	Welsh	% tch	Fish	German	l'alsh	Slavonian	Russlan	Cotals
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# TABLE H.—Third Anthracite District, 1903 ·

Nationality of Persons Injured Inside and Outside the Mines

	American	English	Welsh	Irish	German	Pelish	Hungarian	Slavonian	Lithuanian	Austrian	Dussian	Jew	Totals
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# TABLE L.-Third Anth acite District, 1903

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TABLE 1.—Third Anthracite District, 1903
Operators, Location of Collicries, Railroads, Etc.

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Name of Superin- tendent	E. J. Evans. E. J. Evans. E. J. Evans. Y. J. Williams. Watter Reese. Valter Berse. Watter Reese. Watter Reese. Watter Reese. Watter Reese. Watter Reese. Watter Reese.		The s. Dargott, w. W. Inglis, it. M. Speneer,
P. O. Address	Scranton	Scranton	
Name of General Superintendent	H. A. Philips: C. E. Toby, Assistant, E. A. Philips: C. E. Toby, Assistant, E. A. Philips: C. E. Toby, Assistant, E. A. Philips: C. E. Toby, Assistant, E. A. Philips: C. E. Poby, Assistant, E. A. Philips: C. E. Toby, Assistant, E. R. A. Philips: C. E. Toby, Assistant, E. R. A. Philips: C. E. Toby, Assistant, E. R. A. Philips: C. E. Toby, Assistant, C. E. Toby, A	Lackawama, C. C. Rose,	W. A. May, Funmore,
County	Lackawanna Lackawanna Lackawanna Lackawanna Lackawanna Lackawanna Lackawanna Lackawanna Lackawanna Lackawanna	Lackawanna,. Lackawanna,.	Lackawanna Lackawanna, . Lackawanna, .
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Lackawanna,	Lackawanna,.	Lackawanna, Lackawanna, Lackawanna, Lackawanna, Lackawanna,	Laekawanna,.	Lackawanna,.	Lackawanna,.	Lackawanna
Nay Aug Ceal Co. Nay Aug slope, Nay Aug washery,	Green Ridge Coal Co.	Seranton Coal Co. Capouse, Mount Pleasant, New Ender, Capouse, Mr. Pleasant washery,	People's Call Co.	J. J. Gibbons,	Mountain Lake Coal Co.,	Economy, Light, Heat and Washery, W. J. Northup

TABLE 2.-Third Anthracite District, 1903

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	socophus jo soquusy	283563	3.47	10.17	76	3,970	602 556	1,258	12
	Number of days worked	* 22428	57.70	설립	108		281	255	146
	Total production of coal in tons	294,036 370,034 405,429 336,043 216,63 516,63	2,3,3,2,0	197,:14	212, 152	2, 132, 444	268,580 291,050	559,630	27, 316
jewaci asca,	Number of tons sold to local setup to local trade on box purity	14,914 18,837 6,045 7,734 1,739	1000	l la	65	51,794	4,201 4,0%	8,374	11.835
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TRUITING	County	Lackawanna, Lackawanna, Lackawanna, Lackawanna, Lackawanna, Lackawanna,		Lackawanna Lackawanna,.			Lackawanna,. Lackawanna,.		Laekawanna,.
	Names of Operators and Collieries	Delaware, Lackawanna and Western R. Co. Bellame. Bellame. Distriction of trisbin. Linsbin. Manville.		Diamond washery,		Totals,	Delaware and Hudson Co. Vickson, Von Storch,	Totals,	Bull's Head slope,

\*Totals in this column are averages.

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No. 5 shaft,	A. D. & F. M. Spencer. Spencer Nos. 1 and 2 shatts,	Mine, Nay Aug Coal Co. Bank or washery,	Totals,	Green Bidge slope,	Pine Brook, Scranton Coal Co., Capouse, Mt. Pleasuit, West Itdge.		Capouse washery. Mt. Pleasant washery.		Totals,	Oxford, ivopte's Cont Co.	J. J. Glibous.	Meuntain Iake Ceal Co.	Essuemy Leght, Heat and Power Co. Wasterby.	trand tall,

"Employees included in Nay Aug Stope.

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Number of horses and mules	424 116 116 109 255 257 109 109 1,068
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Number of non-takal acceidents	\$ 1.00 H 4 1.00 H 1.00
Number of fatal accidents	88 89   80   80   80   80   80   80   80
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Number of tons sold to local trade and used by employes	21, 794 2, 774 3, 774 11, 794 6, 299 6, 299 8, 607 13, 700 8, 6670 8, 6670 1000 1000 113, 700
Number of tons used for steam and heat at collieries	S.S. 440 4.5.243 1.507 1.507 1.107 1.106 1.106 1.106 1.106 1.106 1.106 1.106 1.106
Number of tons of coal shipped by rail or otherwise	1, 997, 210 508, 003 13, 981 192, 188 173, 200 120, 670 957, 840 957, 840 14, 653 45, 653 45, 653
County	Lackawanna, Lackawanna, Lackawanna, Lackawanna, Lackawanna, Lackawanna, Lackawanna, Lackawanna, Lackawanna, Lackawanna, Lackawanna,
Names of Operators and Collieries	Delaware, Lackawanna and Western R. Co., Bull's Head Coal Co., Bull's Head Coal Co., Pennsylvania, Coal Co., Pennsylvania, Coal Co., Nay Aug Crail Co., Scranton Crail Co., Scranton Crail Co., L. J. Gibbons, Mountain Lake Coal Co., L. J. Gibbons, Economy Light, Heat and Power Co., Totals,

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	Names of Operators and Collieries	Delaware. Latekawanna and Western R. R. Bellevuc. Hyde Park. Hyde Park. Brisbin. Brisbin. Cayaga, Manyilla.		Diamond washery,		Totals,	Delaware and Hudson Co.  Dicks n.  V.m. store h		Bull's Head Coal Co. Bull's Head slope.	Pennsylvania Coal Co.

TABLE 2-Continued

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		County	Lackawanna	Lackawanna,		Laeka wanna	Laekawanna Laekawanna Laekawanna Laekawanna		Lackawanna			Lackawanna
1		Names of Operators and Collieries	A. D. & F. M. Spencer. Spencer Nos. 1 and 2 shafts,	Mine. Nay Aug Coal Co. Eank or washery.	Totals,	Green Ridge Slope.	Pine Brook, Capanise, M. Pleasant, West Rulee,		Capouss washery. Mt. Pleasant washery.		Totals.	Oxford, Perple's Coal Co.

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TABLE 2- Recapitulation

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TABLE 3.—Third Anthracite District, 1903 Number of Each Class of Employes at Each Colliery

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ide	Total outside	22 42 25 25 25 25 25 25 25 25 25 25 25 25 25	3	4.2	11	936	108	239
Outs	All other employes	\$426118 	3.42	29.62	8	401	48	11.9
ployed	Book-keepers and clerks	<b>ो</b> का का का का का	12	C1 pm	6.0	18	63.51	4
of Persons Employed Outside	(nam) erskielt stall	क्षित विक	8			3	122	88
Person	(syod) sreweit etals	8118884	313	00	00	57.5	51-	17
Jo su	Fingineers and firemen	992099	3	400	-	172	113	35
Occupations	Placksmiths and carpenters	te-majorino.	00	21	2.1	3.7	c: #	1-1
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Š	Superintendents		:	= :	-		-	-
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de	All other employees	\$48EE80	125 1			221	6.2	10
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	Do r-boys and helpers		[=			77	##	1.0
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	Miners' Inhorers	582523 582523	1,036			1,136	163	341
Occupations	stoniM	514 517 517 517 517 517 517 517 517 517 517	1,642	m		1,(48)	118	048
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	County	Lackawanna, Lackawanna, Lackawanna, Lackawanna, Lackawanna, Lackawanna,		Lackawanna,.			Lackawanna,. Lackawanna,.	
	Names of Operators and Collerles	Delaware, Lackawanna and Western R. R. Co. Western R. P. Co. Hyer Turk, Inger Turk, Inger Hyer Hyer Hyer Hyer Hyer Hyer Hyer Hy		Useno nd washery,	Totals		Dickson, Van Storch,	Totals

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Bull's Head Coal Co.	Pennsylvania Coal Co. No. 5 shaft,	A. D. and F. M. Spencer. Spencer Nos. 1 and 2 shafts,	Nay Aug Coal Co. Nay Aug slope. Nay Aug washery.*	Totals	Green Ridge Coal Co.	Scranton Coal Co. Pine Brack, Capouse. M. Picasant, West Ridge.		Capouse washery, Mt. Pleasant washery,		Totals	People's Coal Co.	J. J. Gilbons.	Mountain Lake Coal Co.	Deonomy Light, Heat & Power Co. Washery,	Grand totals,

\*Employes included in Nay Aug slope.

TABLE 3-Recapitulation

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Occupations of Persons Employed Outside	All other employes	
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_	Mine foremen	50000000000000000000000000000000000000
The state of the s	County	l ockawanna. Lackawanna.
	Names of Operators and Col- licties	Delaware Lackawanna and Western R. R. Co., Western R. R. Co., Bull's Bead Coal Co., Bull's Bead Coal Co., A. D. and F. M. Spency, A. D. and F. M. Spency, Green Ridge Coal Co., Greatfon Coal Co., Beaple's Coal Co., Beaple's Coal Co., Beaple's Coal Co., Beaple's Coal Co., Beaple's Coal Co., Beaple's Coal Co., Beaple's Coal Co., Beaple's Coal Co., Beaple's Coal Co., Light, Rett and Fower Co., Light, Rett and Fower Co., Light, Rett and Fower Co., Coal Coal
	Names	Delaware, Western Western Delaware Bull's Head Bull's Head A. D. and Green Rida Scranton of People's C. Mountain Feonmy Feonmy Feonmy Fower (Totals,

TABLE 3-Continued

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Numbet of Days Worked Each Month in Breaker	dette ( S	242244	20.0	1.05 1.03 1.03	19.8	10	16.4	9.4	6.5	19	14.7
Ionth ir	18(t) N	######################################	4.12	4. 4.	23.7	13	21.3	12.0	«	16.9	16 3
Each N	K.ug	553555	11.1	61 65 1 - 10 1 - 10	23.6	13	21.5	12.4	7.1	E	11
Vorked	ec.ng	ឧដ្ឋឧដ្ឋម្ភ	9.12	51 31	e ; ; ; ;	13	50.3	13.0	11.1	\$ 1	17.7
Days 1	(t), w	11111111111111111111111111111111111111	811.6	12.0	31	123	139	10.0	11.3	17.0	18.9
nber of	ffrq7.	चाळ्य (चाठ च शंकीत तथा श	13	23.1	19.8	13	1.1.1	£-	15.0	13.0	17.9
Nan	удльер	15.1 15.0 10.0 10.0 10.0 10.0	15.7	0] 0] 1 0] 14 0 4.	23.3	13	17.1	× ;	14	18.7	16.3
	$\Delta J \simeq \sigma [\phi \phi]$	#986 H C	18.3	9	22 ii	1-	16.1	2	60	15.2	17.4
	2. 9.24	প্ৰার্ক্ত্র নিম্নির্মীয়	77.7	21:21 71:21	83	18	61	6.6	10.6		1.5.4
	County	Lackawanna Lackawanna Lackawanna Larkawanna La kawanna Lackawanna		Lackawanna, Lackawanna,		Lackawanna,.	Гаска таппа,.	Lackawanna,.	Lackawanna	Lackawanna,.	Глекамаппа,
	Names of Operators and Collierles	Lectaware, I gelerate and Western R. R. Co. Relevue shaft and slope, Hyde Park. Higher Park. Hig	A verages,	Dickson, Delaware and Hudson Co. Orekson, Von Storch,		Bull's Head	No. 5 shaft,	A. Iv. and F. M. Spencer. Spencer Nos. 1 and 2 shafts.	Nay Aug Slote,	Green Bidge clipe,	Fine Brook.

TABLE 3-Continued

eaker	November December Tetals	8.3 12.5 10 185 7.7 11.0 9.0 153 6.6 7.1 7.8 118	8.1 10.7 9.3 160	17.8 20.8 22.5 286	26 18 26 266	16 20 18 229	12.9 14.8 15 202
Number of days Worked Each Month in Breaker	Soptember	13.9	12.3	. 24.9		24	12
ch Mont	1sn3nY	13.5 14.3 8.2	13.1	 8.	02	18	17.6
ked En	- July	16.6	11.3	25.5	90	19	18.1
ws Wor	1 June	14.7	14.8	25.9	18	17	17.8
er of da	May	16.7 15.4 10.8	14.8	24.4	8	16	17.3
Numh	firq A.	18.6 16.4 12.8	16.4	25.9	20	18	17 9
	Матећ	19.9	16.6	18.7	24	22	17.2
	February	15.9 11.9	15.8	25.8	12	rz z	17
	January	20.6 17.9 12.9	17.4			%    %	19.6
	County	Lackawanna Lackawanna Lackawanna.		Lackawanna,.	Lackawanna	Lackawanna,.	
	Names of Operators and Collieries	Capouse, Mr. Pleasant West Bligge.	Averages,	People's Coal Co.	Mine, J. J. Gibbon	Mountain Lake Coal Co.	Averages,

TABLE 3-Recapitulation

	slatoF	250 255 255 146 108 113 214 214 266 266 266 266 266	202
Number of Days Worked Each Month in Breaker	Гувовтиров.	2311100112312V	151
	Zozember	######################################	N.
	Осторет	######################################	25.
ith in	September	955555655484 8 5556555	17
ch Mor	18n8nV	22 22 22 25 25 25 25 25 25 25 25 25 25 2	17.6
ked Ea	July	1332131-91395 5-3 844586	15.1
ys Wor	Липе	128.62 11.02.44 12.03.64 11.03.66	17.5
of Da	May	1551 0 0 1 1 1 4 4 1 1 5 1 1 1 1 1 1 1 1 1 1 1 1	17.3
Vumber	lingA	######################################	17.9
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	Viburded	7.82 - 32 - 25 - 25 - 25 - 25 - 25 - 25 - 2	17
	1snnsry	88825°247848	19.6
	County	Lackawanna, Lackawanna, Lackawanna, Lackawanna, Lackawanna, Lackawanna, Lackawanna, Lackawanna, Lackawanna, Lackawanna, Lackawanna,	
	Names of Operators and Collieries	Delaware, Lackawanna and Western R. Co., Delaware and Hudson Co., Delaware and Hudson Co., Dall's Head Coal Co., A. D. and F. M. Spencer, A. D. and F. M. Spencer, Col. Co., Green Ridge Coal Co., Green Ridge Coal Co., Seranten Coal Co., L. Chepter, Coal Co., L. Chepter, Coal Co., L. Chepter, Coal Co., L. J. Gibbons, Mountain Lacke Coal Co.	Averages,

TABLE 4.—Third Anthracite District, 1903 Fatal Accidents in and about the Mines

							-	
Nature and Cause of Accident in Brief	Smothered in culm chute while in the act of starting the culm to run.  Faculty miyired by cars on the inside haul-	Fatally injured by an explosion of powder while riding on an electric motor. Killed by falling under moving mine cars, which he had just uncoupled at the head	of an inside slope.  Fatally injured by falling roof rock at the face of chamber. Died February 9. Fell into choft from the ascending search	District March 13.  Instantly killed by a fall of roof at the face of a chamber in the rock vein.	Fatally mirred by falling roof rock in No. 2 Dummore vein. Died March 4. Was standing on the front bumper of a moving mine car and was crushed between the roof and the coal in the car.	He died.  He died by a blast. Was in the act of charging a hole from which some gas was issuing. The gas became ignited and a premature explosion of the blast	Iollowed. Instantly killed by flying coal from a blast. He thought the shot had "missed." and was in the act of return-	ing to it. Fell into counter chute and was instantly killed.
County	Lackawanna, Lackawanna,	Lackawanna, Lackawanna,	Lackawanna,		Lackawanna, Lackawanna,	Lackawanna,	Lackawanna,	Lackawanna,
Name of Colliery	Green Ridge breaker. Von Storch slope,	Bellevue shaft, Green Ridge slope,	Cayuga,	Brisbin,	Pine Brook, Tripp slope,	Dickson,	Pine Brook,	S Islamond breaker, Lackawanna,
Number of orphans		T :		Fri		64	10	:
Number of widows	: =					H	50   M.   1	<u>:</u>
Married or single	. S.	S. K.	W W		wi wi	. W.		
93Å	E 8	48	48	: :	33			- A 
vecupation	Laborer,	Miner, Headman,	Miner,	Miner,	Miner,	Miner,	Miner,	Slavonian, . Laborer, 21
ity	J, 'c	Irish,	- :					
Nationality	Irish, American, .	: :	Irish,	ch,	Irish, American,		Irish,	oniar
Nat	Irisl	Irish, Irish,	Irish,	Scotch,	Irish, Ameri	Irish,	Irish	Slav
Person	ghen,	es,	gan,	all,	Patrick Regan,		:	:
11	laugh	Hugh	lame	arsh	Regar irtin.	llen,	man,	omai
Name of	nel G	s Me	ok H	t M	ck F	as A	Bren	el R
Z	Michael Gaughen, Benjamin Lewis,	Michael Hughes, Dennis McMahon,	Patrick Hamegan, Frank Lithusky	Robert Marshall,	3 Patrick Regan, 5 Albert Martin.	Thomas Allen,	John Brennan,	9   Michael Roman,
	12 26 ,	[2 co	r 0		23 FD	\$	I	σ,
Jack of archient	Jan.	Feb.			March			April

was	cars	Wein. Walked on to a plane, and was struck with fatal results by a passing trip of	the	oint f a	tom	ing ter t	the r	e to	ii	t of	Ë	ght	the	CMFS
Killed by radicad cars, outside. He was in the act of crossing the tracks to the licket shouts when the cars humbed	him. He died the same day. Killed by falling under moving mine cars at the head of No. 3 plane, Clark	vein. Valked on to a plane, and was struck With fatal results by a passing trip of	moving cars. Instantly killed by a fall of roof at the	Jave of a chamber in the Big vein. Killed by falling roof rock at a point twenty-five feet from the face of a	chamber in Dunmore No. 2 vein, Instantly killed by a blast in the bottom	Fock, which he was in the act of firing Was riding a mule and fell off. His let	deagged and killed to the was in the was Killed by a fall of rock. He was in the act of returning to the face after a	blast, Instantly killed by a fall of rock at point twenty-five feet from the face	top eval	Kill of be falling rock while in the act of	researching discharged props. Wilter by a fall of roof in cross cut in	fall of coal in the "Bight	Foot Year William Food from blast. Kilbed by the first from fook. Kilbed by the food from a blast. Instantly kilbed by a blast be was in the	7
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be t	day ovin	and	Jo 1	ock the	o. 3	ell o	He f	ll of	in. ng	ile i	in o	ii	ock. a b	of y ki
ng t	ame er m	ne. y a	fail	of t	blas	nd f	ock.	fa fa	g ve falli	TI.II.	E Josephan	enal	from from from	trip
d ca ossil	he s undo	pla lts k	oy a	ber 5 ro t fr	imor v a	was le al	led. of r	hy e	r Bi	You.k	of	of	of re	a inst
lroa of cr	ed t ling	resu	S. Ped	uling fee	Dun ed b	mu	TEN LINE	le l y-tiv	Fed	Emg.	fall	fall	ng ng ng ng ng ng ng ng ng ng ng ng ng n	Xeen and
aet sher	him. He died the same day, illed by falling under moving at the head of No. 3 pla	on t	moving cars.	Jave of a chamber in the Big vein Jilled by falling roof rock at a twenty-five feet from the face	r in	ng a	deagent in the higher higher higher higher higher her higher of returning	Kill	a chamber in the Big vein, Instantly killed by falling	Tal.	EZ.	Killed by a	Foot vein. Thed by flyi illied by a f illied by flyi istantly killi	act of fixing. Crashed between a trip of leaded and the releand instantly killed.
the ket	d by	n. Ked h fa	ving intly	# # E E E E E E E	umbe	ridi.	T P	blast, istantly point t	ham	reck ven.			Tatag Tagaga	t Till
KIII	Kille	Wal.	Insta	Kille	cha	Was Was	Kilita	hls Inst	Instr	Kall	ELX.	ZĒ;	Foot ven. Willed by flying coal from blast. Willed by a fail of roof rock. Willed by flying coal from a blas Instantly killed by a blast he w	Crus
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Laekawanna,	Lackawanna,	Lackawanna,	Lackawnnna	Lackawanna	Lackawanna,	/ann	Lackawanna,	Lackawanna,	Lackawanna	Las kawanna.	Lackawanna,	Laekawenna	Lackawanna, Lackawanna, Lackawanna Lackawanna,	ann
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	La	La		Ira		Von Storch slope,. Lackawanna,				178		5.		Bellevne shaft Lackawanna.
			Oxford,	Pine Brook,	Manville,	) ) ) (	Capouse,	Ven Starch slope.	Tripp slope,		Hr le Park,	:	Mt. Pleasant, Cayuga. Fit e Brook, Diamond,	:
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Polish Miner, 30 M. 1 2 Dickson,	American, Driver, 15 S.	Polish, Laborer, 19 S.	46		Miner, 34 M.	91				4	8	69 ; 1	25H15	· · · · · · · · · · · · · · · · · · ·
:	:	:	:	Pelish, Laborer, 35	:	Driver, 16	Miner, 59	Ametican, . Runner, 20	Min+ r, 33		:			:
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natz	Ernest Nowalk,	Alex. Redda,	Conrad Fassold,	George Sneresky	Adam Lucas,	Francis Tully,	trick	Edward Murphy	1. 7.	in M	William Nogles,	Edward Phillips	John Wise, Griffill Davies, Stanl g Boch, Lot Ludwig,	Patrick Carrell,
25   Ignatz Rutscave			C01				2 Patrick Lavelle,		II Peter Zarres,	4 J. hn Moran,			1 John Wise, 2 Criffilh Davies, 5 Stant y Twoch, 9 Lot Ludwig,	Ç.
83	0.1 1.4	30	11	56	11	1-		. 1			9-1	_	E this w	C I
			May		June		July		7.07	÷. · · · · · · · · · · · · · · · · · · ·			N. S. Y.	I leng.
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TABLE 5.—Third Anthencie District, 1903 Non-Fatal Accidents in and about the Mines

Nature and Cause of Accident in Brief	Injured on scalp, back and chest by falling red. Ann fractured between a mine car and the rib, fractured by falling roof in No. 1	These men were more or less injured by an explosion of a keg of powder. They were riding on the motor at the time, which act was a violation of the colliery rules.	Slipped and fell, fracturing a leg. Slightly injured on head and hands. Injured between rib and mine car. Slightly injured by a blust. E.g. dislocated and two ribs fractured by	falling rock. Head cut and internally injured by a fall of roof. Fingers crushed between the bumpers of	mine cars. Fingers crushed by mine cars. Collar bone fractured by flying coal from a blast.	Arm and 195 fractured by funaway cars, inside. Hands and face slightly burned by an ex-	ploston of gas. Higher d by flying coal from a blast. Burned by nine lamp. Leg taken off by mine cars.
County	Laekawanna, Laekawanna, Laekawanna,	Lackawanna, Lackawanna, Lackawanna, Lackawanna, Lackawanna, Lackawanna,	Lackawanna, Lackawanna, Lackawanna, Lackawanna,	Lackawanna, Lackawanna,		Lackawanna, Lackawanna,	Lackawanna, Lackawanna, Lackawanna,
Name of Colliery	Hyde Park,	Bellevue shaft, Bellevue shaft, B. Blevue shaft, B. Bevue shaft, B. Bellevue shaft, Bellevue shaft, Bellevue shaft, Bellevue shaft,	Mount Pleasant, Ituli's Head slope, Green Ridge slope, Dickson,	Bellevue shaft,	Oxford,	Bellevue shaft,	Pine Brook, Hyde Park, Oxford,
Mair.ed or single	M. SS. M.	Zwwwwz	žžio io io	vi vi	vi ¥iv	ž	¥ vi vi
93 <sub>A</sub>	33 35		#848P	. 22	16		145
Оссиратіон	Laborer, Runner,	Miner, Plane runner, Ruener, Runner, Brakeman, Runner, Motorman,		Laborer, Driver,	Driver, Miner,	Minet,	Miner, 45 Door boy, 14 Driver, 16
Vationality	Irish,	Welsh, Welsh, American, English, Irish, Irish, Welsh,	Welsh, Russian, Irish, Irish, Irish,	Welsh,	American, Irish,	English,	Polish, American,
Name of Person	James O'Malley, Edward Taylor,	Thomas Lance, Wm. Davies, Wm. Neotham, Edward Miller, J. Im Margun, James Genitz, Wm. Williams,	Al. Williams, Thisphilin Melinisky, Hugh Murphy, Bryan Moran, John McAndrew,	George Morgan,	William Davies, Walter Haggerty,	William Gayther,	Lewis Pavwa, John Davies, Simon T. Evans,
Date of accident	13 13	51616161616161		11 ii 13	113	30 8	s 11 8
1	Jan.		Feb. March	April			May

Finger taken off by mine cars, outside. Severely injured by falling top ccal. Kicked in stomach by a mule. Lip cut open by a kick from a mule. Hand and face burned by exploding powder. If ins and hack bruised by a piece of fallins and proof pock. Back injured by falling rock. Back injured by falling rock. Back injured by falling rock. Injured by alling rock.	moving mine car, and mule while un- hirching on the "fly."  Compound fracture of the leg, caused by falling roof rook. Hip bone fractured by falling top coal. Ribs fractured by fall of bony, one fractured by mine cars, seriously injured by a premature blast, seriously injured. Caucht between mine-	Colar bar a fractured by hanhars rule.  Rurhael on hands and free while handling, powder carelessity.  Burned on hands and face by an explosion of gas at these of workfing place.  Burned on hands and face by an explosion of gas at the face of chamber.  If the disherated by a fall of roof rook.	Knee dislocuted by the case stribing the lottom, keled by a mule and rend ee! unconscients. Sighthy inned by folling rock in Diamond vein.  [Sightly burned on bruds and free by an I explosion of gas in luminose N. I vein. Lee busised by fulfing under meving mine.	carls.  Fanck injured by falling root rook.  Low fractured by talling off a mule's back.  Low fractured by talling off a mule's back.  Low fractured by falling roof rook.  Low fractured by falling roof rook.  Struck by a runway car.  Riss fractured by falling roof rock at face of chamber.  The gractured by falling roof rook at face of chamber.  Two less fractured by flying coal from blast.  Two less fractured by flying coal from a blast.
Lackawanna, Lackawanna, Lackawanna, Lackawanna, Lackawanna, Lackawanna, Lackawanna, Lackawanna, Lackawanna, Lackawanna,	Lackawanna, Lackawanna, Lackawanna, Lackawanna, Lackawanna, Lackawanna, Lackawanna,	Jackawanna, Jackawanna, Jackawanna, Jackawanna, Jackawanna, Jackawanna, Jackawanna, Jackawanna, Jackawanna,	Lackawanna, Lackawanna, Lackawanna, Lackawanna, Lackawanna, Lackawanna,	Lackawanna, Lackawanna, Lackawanna, Lackawanna, Lackawanna, Lackawanna, Lackawanna,
Diamond breaker, Capouse, Brisbin, Bellevue shaft, Cayuga, Bellevue shaft, Cayuga, Bellevue shaft, Von Storch Slope, Hyde Park,	Hyde Park breaker, Tripp shaft, Capouse, Nay Aug store, Oxford, Dickson, Brisbin,	Bellevue 35 pe.  Hyde Park. Bellevue shaft. Bellevue shaft. Bellevue shaft. Bellevue shaft. Bellevue shaft. Capoutes.	Oxford, Brishin, 'apouse, M. Pleasant, M. Pleasant, West Kidge,	Bellacene shaft, Hyde Park breaker, Diamond breaker, Cayuga, Manville, Pine Brook,
WESE WENGER	NEEN'S E	ZNESNE EN	NY E E N E	EE E ENENE
	9 % 48889	84 6885288	\$ 4 18 88 81 	### 6 ###
Dumper, Miner, Driver, Miner, Miner, Miner, Miner, Diver, Driver, Driver, Driver,	Driver, Miner, Miner, Miner, Miner, Miner, Kunner,	Driver boss Miner, Laborer, Miner, Taborer, Runner, Miner,	Fire boss, Driver, Miner, Zaborer, Laborer,	Miner. Driver. Miner. Laborer. Footman. Miner. Laborer. Miner.
Austrian, English, Austrian, Erish, English, Polish, Polish, American, American,	American, American, American, Irish, Polish, Irithuanian, Irish,	English, English, Trish, Polish, Itish, Itish, Itish, Itish,	German, Savanian, German, German, Polish, American, Canan,	Irish, American, Irish, Irish, Polish, Irish, Irish, Irish,
John Moser, Nicholas Hellening, Alexander Sitsynsthre, James Hughes, Thomas Fletcher, John Gish, Patrick Mahon, B. Swunge, B. Swunge, Archie Edwards,	John Judge.  Elezer Morgans.  William Williams. Kicharel Coleman. John Peleskie. Felix Minosky. Estry, Rardy, Raddy,	James Met'arty, William Johnson, Frank McPonald, John Golden, R. Scabill, R. Scabill, Glarles Burke, Charles Pepper,	Charles Castsch John Nowalk, Parl Soyder, Anthony Patchincha, John Smith, William Russell,	John Wright, Charles Adams, Petrick Plaherty, Thomas Collins, Mike Jump, Thomas McGuire, Anthony Stininskie, Ralph Yerkman,
#82 + FE88	5 \$ \$ \$ 5 E E E E E	X 00 0000 / / x x	2 # # 222	म्हम्बर्ध ए एक्
June	July	A	Ĵ.	Oet.

TABLE 5- Continued

Copyr to approximates in the course the plant of the control of th	1 -	_,		
Nature and Cause of Accident in Brief	Kicket by a mule, they have by falling roof rock. Highs fractured by falling under moving nine cyrs,	near and hips injured by failing reet ready. The last fractured by failing roof rock. First facts woof of engine house.  The A by Ken by cars, inside to and shoulders injured by failing reof.	struck by flying coal from blast.  Leg fractured by cars, inside,  Slightly injured by an explosion of gas.  Three ribs fractured by falling roof rock.  Slightly burned by an explosion of gas, injured by flying coal from his own blast,  Leg fractured by hallage rope,  Leg fractured by hallage rope.  Leg fractured by falling top coal.  Back injured by falling of the bumper of	a moving mine car. Back injured by falling roof rock. Leg fractured by falling roof rock.
County	Lackawanna, Lackawanna, Lackawanna,			Lackawanna, Lackawanna,
Name of Colliery	Bellevue shuft, Green Ridge slope,. Capouse,	Capouse. Brisbull, Brisbull, Brisbull, Bellevue shaft,	Mt. Pleasant, Tripu Stage Dickson, Dickson, Priston Rriston Rriston Friston	West Ridge,
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93V	11S 12S 1		62 140 150 150 150 150 150 150 150 150 150 15	36
noilequovO	Driver, Laborer, Runner,			Miner,
Nationality	American, Slavonian, Irish, German		Polish, Jew. Fancilsh, Hungarian, German, Polish, Slavonian, Slavonian, Lithnanian, Irish,	Welsh, Polish,
Name of Person	Frank Blanchard, Michael Penoch, John Campbell, Charles Schnader		John Coumasky, Hentry Bashusky, John Sitka, John Cook, Anthony Rice, Charles Gowald, John Zenceky Joseph Gustitus, John Grathan,	John E. Samuels,
Date of section;	16 7 10	<b>=122</b> 2	188 188 188 188 188 188 188 188 188 188	21
the state of the s	Nev.		Dec.	

### Description of Accidenta

The tables that make up a part of this report will show the accidents classified as to causes, occupation and nationality of the killed and injured.

In the reports for past years the accidents have been described at some length, either singly or in groups under heads, Falls of Roof and Coal, Explosions of Gas, Cars Inside, Cars Outside, Miscellaneous Inside, Miscellaneous Outside, etc. In reviewing the reports of my investigations of the several accidents for 1903, I fail to see that any special feature has been revealed requiring particular mention or description. Therefore, any detail that will be written touching the accidents of this year will be much in the nature of a repetition of what has been written in the past, on the same subject, in the yearly reports already issued.

Based on my observation and experience in investigating the accidents of the year 1903, I would say, such accidents from falls of roof and coal as could be classed avoidable, would have been avoided in most cases by a more careful examination of the roof before starting to work in the morning, and after each blast the immediate restanding of the discharged timbers after paying due heed to every indication of possible danger by sounding.

## Explosions of Gas

During the year not a single fatal accident from this cause is reported. Twelve non-fatal ones are recorded. The victims of the greater number of these were but slightly injured. The greater number of the accidents resulted from the careless handling of brattices near the face of gaseous places.

### Cars, Inside

It will continue to be the duty of the Mine Inspector to call attention to the dangerous practice resorted to by drivers and runners, viz: That of riding on the bumpers of moving mine cars, and sliding the foot along the track. While attention has repeatedly been called to this matter and special efforts made to discontinue the dangerous practice, still accidents from this cause continue to occur.

# Powder and Dynamite

The one fatal and nine non-fatal accidents due to this cause resulted from a number of workmen riding on an electric motor in a mine on their way to work in the morning, after repeated warnings

not to do so. One of the company had a keg, containing twentyfive pounds of powder, which was exploded by some means, probably a spark from a lamp or the electric wire.

### Blasts

In firing wet holes, it is more than probable that the squib in many cases is shortened, but every means of proving this to be the fact is destroyed with the accident. The tendency to return too soon to the face, thinking the squib has missed fire, and insufficient care in selecting a place of safety to retreat to while the blast is going off, tend to increase the number of accidents from this cause.

#### Accidents Outside

One of the victims of the outside accidents lost his life in the culm chute of the Green Ridge Breaker; one lost his life by being run over by railroad cars, one fell into a counter-chute, in the Diamond breaker and was crushed by a revolving screen, and one was killed by being dragged by a mule. In addition to these four fatal accidents, six non-fatal accidents occurred on the outside. Four of these are credited to mine cars outside, and the remainder to miscellaneous causes, uncoupling cars on the "fly," falling off mule's back while riding to or from barns, etc.

Inasmuch as the question is often asked, "How is it that those who are careless are not prosecuted by the mine inspectors as provided by law?" I would answer,—those who transgress in this particular, concerning whom the Inspector has information are generally among those who suffer by the accidents, and therefore, perhaps, no further good could be accomplished by a process at law.

In former reports comparisons were made with the figures of previous years, the annual reports affording the means to do this, but this comparing of results cannot be done this year, inasmuch as the district covered by this report, namely the Third, has been in existence just one year.

### Condition of Mines and Ventilation

The condition of the mines as to ventilation, will compare favorably with their condition at the time of the last report. More coal has been mined, and consequently the excavations have extended in proportion, and the territory to be examined daily is continually increasing in area. As to ventilation, Table I will show the actual quantity of air in circulation as reported to this office in December, 1903, the number of splits or currents and the number of persons

employed in each split, in each of the mines of the district. The table shows that the law is being well observed in this respect. Inasmuch as the figures for each mine are given, no comments as to the quantity of air in circulation are required. I would add, however, that the total quantity of air in circulation does not in every case show the condition of the ventilation of the working face. On this account while the quantity entering the mine is sufficient, the distribution of the current is sometimes found defective in nongaseous mines. Whenever this is found to be the case the Inspector has had but little difficulty in having the defect remedied at once. In gaseous mines this distribution of the current cannot be neglected without serious consequences, as gas immediately accumulates in the face.

## Drainage

Little cause for complaint on account of defective drainage exists in this district, particularly in the workings of the lower or deeper veins, which are for the most part dry, more so in fact, than is desirable. The inspector has during the year deemed it his duty in some cases to recommend that the main roads be sprinkled with water, to prevent dust from contaminating the fresh air currents entering the workings. This suggestion has been carried out with beneficial results. However, in some cases in which the shallow veins are worked, trouble is met in the workings, particularly in the spring and fall of the year. Not so much on account of drainage, in the common acceptation of the word, as from the fact that surface water penetrates the strata, descending like rain for a short time into the workings of the surface veins. Under these circumstances, no efforts are spared to maintain dry and clean roads in the mines.

### Mine Foremen's Examinations

The annual examination of candidates for certificates as mine foremen and assistant mine foremen was held October 8 and 9, 1903, in the City Hall, Scranton, Pa. The following named persons were recommended to the Chief of Department of Mines, as having passed a satisfactory examination:

#### Mine Foremen

Horace L. Johns, Thomas F. Sheehan, Charles Hillard, Thomas Ford, John V. James.

### Assistant Mine Foremen

Benjamin C. Evans, John H. Williams, Thomas J. Gwynne, Thomas Thomas, Jr., David J. Thomas, John S. Cole, David J. Thomas, Thomas W. Watkins, Joseph R. Burns, James J. Cusick.



# Fourth Anthracite District

LACKAWANNA AND LUZERNE COUNTIES

Scranton, Pa., February 18, 1904.

Hon. James E. Roderick, Chief of Department of Mines:

Sir: I have the honor of herewith presenting my report as Inspector of Mines for the Fourth Anthracite District, for the year ending December 31, 1903. The quantity of coal produced during the year was 5,411,814 tons. The number of lives lost was 42, leaving 20 widows and 42 orphans. The number of non-fatal accidents was 117, making the total number of casualties in and about the mines 459.

In addition to the tabulated statistics, I send herewith a brief description of each accident in and about the mines; also, a statement of the condition of the mines as to ventilation and drainage.

Respectfully submitted,

D. T. WILLIAMS, Inspector.

# Fourth Anthracite District, 1903 SUMMARY OF STATISTICS

Number of mines in district,	25
Number of mines in operation,	25
Number of tons of coal produced,	5,411,814
Number of tons shipped to market,	5,150,784
Number of tons sold at mines to local trade,	51,585
Number of tons consumed at mines in generating steam	
and heat,	209,445
Number of persons employed inside the mines,	7,582
Number of persons employed outside,	2,876
Number of fatal accidents inside the mines,	35
Number of tons produced for each fatal accident inside,.	154,623
Number of persons employed per fatal accident inside,	217
Number of fatal accidents outside,	7
Number of persons employed per fatal accident outside,	411
Number of wives made widows by fatal accidents,	20
Number of children orphaned by fatal accidents,	42
Number of non-fatal accidents inside of mines,	104
Number of persons employed per non-fatal accident inside,	73
Number of non-fatal accidents outside,	13
Number of persons employed per non-fatal accident out-	
side,	221
Number of electric motors used inside,	3
Number of fans used for ventilation,	28
Number of furnaces used for ventilation,	2
Number of gaseous mines in operation,	21
Number of non-gaseous mines in operation,	4

# TABLE A.—Fourth Anthracite District, 1903.

### PRODUCTION OF COAL

Names of Companies	Tons						
Delaware, Lackawanna and Western Railroad Company,.	3,323,758						
Austin Coal Company,	66,894						
Delaware and Hudson Company,	331,742						
Pennsylvania Coal Company,	79,860						
Wm. Connell and Company,	117,678						
Lehigh Valley Coal Company,	569,299						
Jermyn and Company,	478,736						
Elliott, McClure and Company,	193,378						
Gibbons Coal Company,	26 235						
Temple Iron Company,	142,392						
North American Coal Company,	52,244						
Brookside Coal Company,	29,597						
Total,	5,411,814						
Production by Counties							
Lackawanna,	5,269,422						
Luzerne,	142,392						
Total,	5,411,814						

TABLE B.-Fourth Anthracite District, 1903

Fatal and non-fatal accidents: number of tons of coal produced per accident; number of persons employed; number employed per accident

11			
	Number of employes of	172 162 278 278 288 288 288 288 288	1221
	Number of employes of stal accide	343 50 50 324 180	411
-ni -ioo	Symplor of employes side per non-fatal a finap	66 103 57.8 57.7 69 123	53
	Number of employes	231 272 273 814 153 347 133	217
02.6g	Total number of emplo	5 074 1.673 1.673 1.673 1.977 1.977 1.978	10,478
-pno	Number of employes	E2 22 18 24 24 24 24 24 24 24 24 24 24 24 24 24	2,876
əbiz	Numer of employes in	6.10 0.17 0.17 0.17 0.17 0.17 0.17 0.17 0	7,572
19q Spiral	Description of coal produced in the produced i	1882118871 18821188 19881198	12,037
Der	besuboud 1800 to ste T ebiani Insbison Intel	20,000 10	154,623
Accidents	Total	4-51-001-001	117
atal Ac		ο ο ο πε	113
Non-Fatal	ebiznI	16 a 2 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8	104
dents	Total	\$1-000400-N	45
Fatal Accidents	əpisinO	4-4-	<b>!~</b>
Fat	obisul	G 6004000H0	35.
	Names of Companies	Delaware, Lackawanna and Western R. R. Co., Co., Co., Co., Delaware and Hudson Co., Pennsylvania Coal Co., Lehich Valloy Coal Co., Lehich Valloy Coal Co., Lehich Valloy Coal Co., Remple Ton Co., Remple Ton Co., Miscellaneous companies,	Totals and averages for distri t

TABLE C.—Fourth Anthracite District, 1903 Classification of Fatal Accidents

		Into Innet)	P 13 C m 4 4 4 m 4 m 4 m 4 53
		obistno fat d'	H H 0101 H 1-
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of Mir		sucisoldx) reflect (I	
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00		Ande Gomin (C)	пп
		Dy cars	
	1	ebreat Intell	C 10 10 11 21 11 11 11 12 12 12 12 12
		Misc. Hane us causes	
		Sufficated by coal, etc.	
	-	137. mules	- H
		equation at batteries	
	By Falling Into	Manways, breasts, etc.	
ines		sadol2	
Inside of Mines	List	shafts	
Inside		By blasts, etc.	01
		Smither d by gas	C1-1 22
:		By explosion of eas	
· .		By mine cars	
I	lls of	- 10.4H	
	By Falls of		0
	_	- [B)	 
			<i>a</i> .
			James N. Peter of National May May May May May May May May May May
			January Pelancaty March Aspill Angest Jones September November December

TABLE D.—Fourth Anthracite District, 1903 Classification of Non-Fatal Accidents

		Grand total	811 0 0 1 4 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
		Tretal outside	13 11 22 11 23
70		Wiscellaneous causes	H HH 87 HH 15
Mines		By builer explosions	
Outside of Mines		By suffocation	
Outsi		Ву тасышету	-     -
	-	By ears	m
		əbisni İstof	21 8 12 4 10 1 1 2 1 2 1 2 1 2 1 2 1 2 1 2 1 2 1
	-	Miscellaneous causes	00 <u>1</u>
		Sufficiented by coal, etc.	
		By mules	01
		Crushed at batteries	
	By Falling Into	Manways, breasts, etc.	
		Slopes	
Inside of Mines		shads	
le of		By blasts, etc.	
Insid		Powder and dynamite	a
		Smothered by gas	
		By explosion of gas	H : 101   H
	-	By mine cars	0010104-014 of 0
	of	100A	ରାଳାଜ୍ୟ (କ୍ରୀରୀ ଓ
	Falls o	Slate	
	Dy. H	[go')	6 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 -
			January, February March, May, June, June, June, Jodober, October, November Totals,

Occupations of Persons Killed or Fatally Injured Inside and Outside the Mines TABLE E.-Fourth Anthracite District, 1903

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	Into banati	[412.5 H. d. d. d. d. d. d. d. d. d. d. d. d. d.
	Potal outside	2121 - t-
	All other employes	H H 610 H 2
	роок-кееретя апа стетк	
Outside	Slote bickets (men)	
Ont	Slate pickers (boys)	
	Engineers and fremen	
	Ellarksmiths and carpenters	
	nəm⊶roi əbisiu()	
	superintendents	
	obisai IstoT	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
	All other employes	61 61
	(jombany men	60
	Ептртеп	
9	Door-boys and helpers	F - 0
Inside	arendur and respectively	7
		00-101 01 -
	stanik	w siee of si 5j
	Fire bosses and assistants	
	remember of mine foremen	
	Mine foremen	
		January, Pebruary Agarch, Ayarl, May, June, June, June, Nowmber, Nowmber, Lkeember,

Occupations of Persons Injured Inside and Outside the Mines TABLE F.-Fourth Anthracite District, 1903

		· · · · · · · · · · · · · · · · · · ·
	fated based	2日の名乗り300円を10年
	Polistuo fatoT	10 MM 21 1 1 1 1 2 1 2 2 2 2 2 2 2 2 2 2 2
	All other employes	12 85 21 524 2
	Book-keepers and clerks	
Outside	Slate pickers (men)	
Out	Slate pickers (boys)	
	Tomorn bas ersonigner	
	Blacksmiths and carpenters	
	natnovol abishuo	
	Supportation supports	
	ebizai Into'T	104 100 11 88 118
	All other employes	
	Company men	
	Типпртеп	
	Door-boys and helpers	H   -
Inside	Drivers and runners	. 000004 -000
	Miners' laborers	
	Miners	00 F3 H f → A H 07 H 00 H 00 00   20
	Fire bosses and assistants	
	Assistant mine foremen	
	Mine feremen	
		January. February. February. April. April. April. June

### TABLE G.-Fourth Anthracite District, 1903

Nationality of Persons Killed or Fatally Injured Inside and Outside the Mines

	u r	1					=		
	American	English	Welsh	20 de 10 de	To list.	Italian	7 September 1	Kussian	Totals
January,					0	:			
March, April, May, June,		1							
July, August, Septembar,					-1		1		
Klober, November, December,						1			
Totals,		3	6	2	11	`	2	1	1

TABLE H.—Fourth Anthracite District, 1903

Nationality of Persons Injured Inside and Outside the Mines

	American	Unglish	Welsh	Insh	therman)	Polish	Imngarkan	Italian	Slavonian	Lithuanian	Aestrian	Russian	Swiss	Totals
January, February, Manch, April, May, Inne, July, August, Septander, October, November, December,	4 2 2 2 1	1	3 1 1 1 2 2	1 2 2 1 1 1	i i	6 5 1  2 5	1		1	· · · · · · · · · · · · · · · · · · ·		1	1	13 11 16 16 14 5 12 7 13 4 7 6
Totals,	21	1 1	13	14	2	38	2	10	1	2	1	1	23	117

Operators and mines, kind of openings, type and size of fans, size of furnaces, volume of air produced by fan or furnace per minute, number of splits of air currents, number of persons employed inside, and quantity of air produced for each employe per TABLE I.—Fourth Anthracite District, 1903

minute

241 241 242 349 349 349 242 242 243 454	400	467 346 315	461	250 516
301 169 189 191 191 122 123 123 123 123 123 123 123 123 12	9.5	190 224 130	104	118
151, 940 168, 410 88, 281 231, 339 142, 000 106, 60 81, INS 203, 876	47,710	113, 150 125, 400 47, 440	56, 700 65, 800	114,240
13, 24 13, 24 13, 24 13, 25 13, 25 13, 25 11, 26 12, 26 12, 26 12, 26 12, 26 12, 26 13, 27 14, 26 16 17, 27 17, 27 18 18 18 18 18 18 18 18 18 18 18 18 18	30,402	SS, 740 77, 652 40, 900	48,000	S4,620 (0,900
148,010 154,580 83,884 186,280 138,275 140,124 176,454 176,454 196,102	41,620	101, 100 88, 495 46, 670	50,500	108,140
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80044404408 000 10 10	70.	10 10 4 10	44	10 10
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16 16 17 17 17 17 17 17 17 17 17 17 17 17 17	12	1288	16	18
Fan, Fan, Fan, Fan, Fan, Fan, Fan,	Fan,	Fan, Fan, Fan,	Fan,	Fan,
Gaseous, Gaseous, Gaseous, Gaseous, Gaseous, Gaseous, Gaseous,	Non-gas.	Gaseous, Gaseous, Non-gas.	Non-gas. Gaseous,	Gaseous,
Shaft Shaft Shaft Shaft Shaft Shaft Shaft	Drift	Shaft, Shaft, Slope,	Tunnel,	Shaft,
D. L. and W. R. R. Co. Archbald, Goalian, Central, Continental, Consider, Holden, Pyna, Pyna, Pyna, Taylor shaft,	Austin Coal Co.	Pennsylvania Coal Co. Old Forge No. 1, Old Forge No. 2, Old Forge slope,	Wm. Connell and Co.	Lehigh Valley Coal Co. Lawrence shaft and drift.
	Shaft Gaseous   Fan   16   3.5   3.5   1.0   6   Open running   Steam   7   148.010   134.540   215.940   301.	Shaft, Gaseous, Fan.   16   3.5   3.5   1.0   6   Guibal,	Shaft. Gaseous. Fan.   16   3.5   3.5   1.50   .6   Open running. Steam.   7   148 010   134,540   151,940   301   315,680   315   316   315   316   315   316   315   316   315   316   315   316   315   316   315   316	Shaft. Gascous. Fan.   16   3.5   3.5   1.0   .6   Open running. Steam.   7   145.680   134.540   151.940   301   301   301   301   302

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00.01		x x	9	0100
Steam	Steam.	Steam	Steam	Steam,
Open running, Nat. vent	5 65 .4 Open running, Steam. 2.5 60 .2 Open running, Steam. 4 100 .3 Open running, Steam.	Open running, Open running, Open running,	Open running.	Guibal,
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Shart Drift	Design of the control	Shaft	Shart	Shait
Delaware and Hudson Co. Gr. enwood New No. 1. Greenwood Old No. 1. Greenwood New County vein	Delaware and Hudson Coal Co. Greenwood No. 12, Greenwood No. 2, Greenwood No. 2 slope, Greenwood No. 2 slope, Greenwood No. 2 slope, Greenwood Orit, Spring Brook, Spring Brook, Spring Brook, Spring Brook, Spring Brook, Spring Brook, No. 3 drift,	Jermyn and Co. Jermyn No. 1,	Elliott, McChure and Co. Sibley.	Temple Iron Co. Babylon, Babylon,

Operators, Location of Collieries, Railroads, Etc. TABLE 1.—Fourth Anthracite District, 1903.

		1					
	Railroad to Mine	DD. L. and W. C. L. and W. C. L. and W. C. L. and W. C. L. and W. C. L. and W. C. L. and W. C. and W. and W. C. and W. C. and W. C. and W. C. and W. C. and W. C. and	D., L. and W. D., L. and W. D., L. and W. D., L. and W.	Lehigh Valley.	E. and W. V. E. and W. V. E. and W. V.	Delaware and Hudson Delaware and Hudson Delaware and Hudson Lolaware and Hudson Delaware and Hudson Delaware and Hudson Delaware and Hudson Delaware and Hudson Delaware and Hudson Delaware and Hudson	Delaware and Hudson
	P. O. Address	Scranton, Scranton, Scranton, Scranton, Scranton, Scranton, Scranton, Scranton, Scranton, Scranton, Scranton, Scranton, Scranton,	Scranton, Scranton, Scranton, Scranton,	Old Forge,	West Pittston, West Pittston, West Pittston,	Scranton, Scrant	Scranton
	Name of Superin- tendent	Thos. J. Williams. Thos. J. Williams. Thos. J. Williams. Thos. J. Williams. E. J. Brans F. J. Brans Thos. J. Williams. Thos. J. Williams. E. J. Evans. L. Williams. E. J. Evans. J. Williams. E. J. Evans.	Fred. C. Smith, Fred. C. Smith, Fred. C. Smith, Thos. J. Williams,	Moses D. Evans, .	H. F. McMillan, H. F. McMillan,	E. R. Pettebone. E. R. Pettebone. E. R. Pettebone. E. R. Pettebone. E. R. Pettebone. E. R. Pettebone. E. R. Pettebone. E. R. Pettebone. E. R. Pettebone. E. R. Pettebone.	E. R. Pettebone,
	P. O. Address	Scranton, Suranton, Scranton,	Scranton, Scranton, Scranton, Scranton,	Scranton,	Scranton, Scranton, Scranton,	Scranton, Scranton, Scranton, Scranton, Scranton, Scranton, Scranton, Scranton, Scranton, Scranton, Scranton,	Scranton,
	Name of General Superintendent	R. A. Phillips, R. A. Phillips	R. A. Phillips, R. A. Phillips, R. A. Phillips, R. A. Phillips,	W. G. Rcbertson, .	W. A. May, W. W. Inglis,	CCCCRose CCCCRose CCCCRose CCCRose CCCRose CCCRose CCCCRose CCCCRose CCCCRose CCCCCRose CCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCC	C. C. Rose,
	County	Lackawanna, Lackawanna, Lackawanna, Lackawanna, Lackawanna, Lackawanna, Lackawanna, Lackawanna,	Lackawanna,. Lackawanna,. Lackawanna,. Lackawanna,.	Lackawanna,.	Lackawanna, . Lackawanna, . Lackawanna, .	Lackawanna, Lackawanna, Lackawanna, Lackawanna, Lackawanna, Lackawanna, Lackawanna, Lackawanna, Lackawanna, Lackawanna,	Lackawanna,.
	Names of Operators and Col- lieries	lelaware, Lackawanna and Western R. R. Co. Archbald. Sivan. Contrad. Contrad. Dodge. Heiden. Heiden. Tanpton.	Washeries—Bellevue, Hampton, Taylor, Pyne,	Austin Coal Co.	Pennsylvania Coal Co. Old Forge No. 1 shaft, Old Forge slope, Old Forge No. 2 shaft,	Ledaware and Huds.n Co. Greenwood No. 1 shaft, Greenwood No. 1 shaft, Greenwood No. 2 drift, Greenwood No. 12 drift, Greenwood No. 25 drift, Greenwood No. 25 drift, Greenwood No. 2 shaft, Greenwood No. 6 drift, Greenwood Ni. 6 dr	Washery— Greenwood washery,

Wm. Connell and co National shart, Meadow Brook tunnel,	Lackawanna,. Lackawanna,.	HH HH	Ripple,	Lackawanna, E. H. Ripple, Scranton	S. T. Jones,	Seranton,	D. I. and W.
Lehigh Valley Co.d Co. William A., Lawrence, Drifts Land 2,	Lackawanna,. Lackawanna,. Lackawanna,.	www CCC	Warriner, Warriner,	Wilkes-Barre, Wilkes-Barre, Wilkes-Barre, Milkes-Barre, Mi	Thos. Thomas, Thos. Thomas, Thos. Thomas,	West Pittston West Pittston	Lobigh Valley Lobigh Valley Lobigh Valley
Jermyn and Co. Jermyn No. 1. Jermyn No. 2. Jermyn No. 3.	Lackawanna,. Lackawanna,. Lackawanna,.	医原现	E. B. Jermyn, E. B. Jermyn, E. B. Jermyn,	Rendam, Rendam, Rendam,	E. B. Jermyn, E. B. Jermyn, E. B. Jermyn,	B. Jermyn, Rendam, B. Jermyn, Rendam, B. Jermyn, Rendam,	N. Y., O and W. N. Y., O and W. N. Y., O and W. N. Y., O and W.
Elliott Meclay - nd Ca, Slidey,	Lackawanna,.	R. W.	R. W. Bees,	Rendam,	W. Penn Morgan,	Seranton,	Lehigh Valley
Gibbons Call 'o.	Lackawanna,.	Michae	1 Gibbons, .	Lackawanna, Michael Gibbons, Feranton	Michael Gibb ns, .	Michael Gibb ns, Dunmore,	
Temple Iron Co. Luzerne,	Luzerne,	E H	F. H. Hemelright,	Seranton	George Steele,	West Pittston,	Lehigh Valley
North Airerican Coal Co. National washovy,	Lackawanna   H. W. Saums,	н. W.	Saums,	Wilkes-Barre,			Dejaware on Undson
Brooksile Coal Co.	Lackawanna,.	M. F.	· · · · · · · · · · · · · · · · · · ·	Seranton,			Lackawanna, M. F. Dolphin,, Scranton,

TABLE 2.—Fourth Anthracite District, 1903

Number of tons of coal mined in each colliery, number of days worked, number of persons employed, number killed and injured, number of kegs of powder used, etc.

County	Number of tons of coal shipped   Number of tons of coal shipped   Number of tons of coal shipped   Number of tons of coal shipped   Number of tons of coal shipped   Number of tons used for steam   Number of tons used for steam   Number of tons used for steam   Number of tons used to local   Number of tons used tons used to local   Number of tons used to local   Number of tons used to local   Number of tons used tons used to local   Number of tons used tons used to local   Number of tons used tons used to local   Number of tons used tons used to local   Number of tons used tons used tons used to local   Number of tons used tons used tons used to local   Number of tons used tons used to local   Number of tons used tons used tons used to local   Number of tons used tons used to local   Number of tons used tons used to local   Number of tons used tons used to local   Number of tons used to local   Number of tons used tons used to local   Number of tons used to local   Number of t	La La La La La La La La La La La La La L	Austin Coal Co.
2335,555 Minnber of tons of coal shipped by trail or otherwise by trail or otherwise by trail or otherwise by trail or otherwise by trail or otherwise mad by trail or otherwise size, 14,419 minnber of tons used to local seed by employees 125,518,137 minnber of tons used by employees 125,518,139 minnber of tons used by employees 125,518,139 minnber of tons used by employees 125,518,139 minnber of tons used by employees 125,518,139 minnber of tons used by employees 11,430,677 minnber of days worked 11,430,677 minnber of days worked 11,430,677 minnber of days worked 11,430,677 minnber of days worked 11,430 minnber of days worked 11	23.22.5.55	County County Cawanna Ckawanna Ckawanna Ckawanna Ckawanna Ckawanna Ckawanna Ckawanna Ckawanna	Lackawanna,.
Downley of tons used for steam Mumber of tons used for steam and heat at collieries and heat at collieries and to local living to the sold to local living to	12, 14, 14, 14, 14, 14, 14, 14, 14, 14, 14	baddida Igoo lo anot lo radmuN seggentes in says in	61,427
237, 585 220	23.3.3.5.6.6		3,300
285, 285	283, 585 585 585 585 585 585 585 585 585 58		2,167
2 8 8 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	Aumber of employees 183   1   1   1   1   1   1   1   1   1		66
	sine and the state of taken accidents	Number of days worked	117
			153
		besu bounds of dynamite besu 25,500,000 cm bounds of dynamite besu 25,500,000 cm besu 25,	o l
122,000   122,	Number of pounds of dynamite beau Systems of dynamite beau as a second system of systems of dynamite beau as a second system of systems of dynamite beau as a second system of systems of s	selum bas sessod to redmuN 61515241538 8 0 4 6	11

\$64,183 tons used for steam was shipped from collieries of the company.

\*Totals in this column are averages.

Greenwood No. 1.	Lackawanna,.	] 109,493	12,702	2,042	214,237	218	814	:	9	15,486	19,670	84
Springbrook,	Lackawanna,.	53,963	6,290	1,039	61, 291	213	240		: -	4,769	7, 434	24
		253, 455	18,992	3,081	275,528	216	1,054	60	12	20, 255	27, 104	155
Greenwood washery,	Lackawanna	56,214			56,214	S21	28					
Totals,		309,669	18,992	3,081	331,742		1,082	6.0	12 .	20, 255	27,104	155
Pennsylvania Coal Co.	Lackawanna,.	75,854	3,830	921	79,860	43	738	6.3	-	2,982	2,834	83
Wm, Connell and Co. National shaft, Meadow Brook tunnel,	Lackawanna Lackawanna,.	102,661	000.2	6,517	117,678	156	215	4		4,370	3,500	23
Totals,		102,661	8,500	6,517	117,678	156	367	4	10	7,115	12,10	25
William A, Lehigh Valley Coal Co. Lawrence,	Lackawanna,. Lackawanna,.	231,190 1°9,270	23,610	3,017	357, S17 211, 482	232	645 262	01	10.4	10, 429	12,575	1983
Totals,		530,460	35,822	3,617	569,299	223	206	ବୀ	6	14, 129	13, 175	6×
Jermyn No. 1, Jermyn and Co. Jermyn No. 2,	Lackawanna Lackawanna	255,909 189,587	16,887	4,278	277,074 201,662	217	688 517	9	5. V.	14,624	9,700	38
Totals,		415, 496	28, 962	4, 278	478,736	196	1,205	9	t-	23,781	28,175	88
Sibley.	Lackawanna,.	174,718	16,425	2,235	193,378	201	10	-	10	7,114	1,275	15
Gibbons Coal Co.	Lackawanna,.	8, 1561	1,000	16,675	26,236	£1	64			1,062	100	30
Temple Iron Co.	Luzerne,	133,950	\$,412		142,392	178	295	03	0.1	4,919	2.600	49
North American Coal Co. National washery,	Lackawanna,.	47,739	3,910	5.53	52,244	"	85		-			ge
Brookside washery.	Lackawanna,.	27.317	2,000	25.0	29,597	158	8.					
Grand totals,		5,150,7%	2:19, 445	51,585	7,411,04		10,458	   章 	11.	169, 215	95,277	1,176

\*Totals in this column are averages.

TABLE 2-Recapitulation

salum bas sastod to radamX	200 200 200 200 200 200 200 200
simmenyb to spanned to teaming for bosu	6, 997 27, 104 2, 834 12, 100 13, 175 1, 275 1, 2600 2, 600
Number of kegs of powder used	86, 087 1, 761 20, 255 2, 985 2, 985 1, 118 23, 73, 11 7, 114 1, 062 4, 919
Number of ner-fatal accidents	64 11 12 12 12 13 14 11 11 11
Number of fatal accidents	0 H 8 8 4 4 4 6 4 6 4 6 4 6 4 6 4 6 4 6 4 6
Mumber of employes	5, 074 1, 082 1, 082 1, 082 3, 047 1, 205 5, 205 6, 4 295 205 20 10, 458
Munber of days worked (Not including washeries)	223 1173 1166 223 223 224 224 224 224 224 224 224 224
Total production of conlin rons	3, 323, 755 6, 854 331, 742 79, 864 117, 678 678, 755 118, 317 26, 284 12, 284 52, 244 29, 557
Number of tons sold to local trade and used by employees	12, 614 2, 167 3, 081 6, 517 6, 617 16, 673 16, 673 17, 885 17, 885
Number of tons used for steam and heat at collieries	200 445
by rail, or otherwise	3, 232, 552 06, 427 06, 427 76, 5534 102, 653 117, 5534 117, 718 13, 560 14, 7739 27, 734 27, 734 27, 734 27, 734
County	Lackawanna, Lackawanna, Lackawanna, Lackawanna, Lackawanna, Lackawanna, Lackawanna, Lackawanna, Lackawanna, Lackawanna, Lackawanna, Lackawanna,
Names of Operators and Collicties	Delaware, Lackawanna and Western R. R. Co Austin Coal (°). Delaware and Hudson Co. Pennsylvana Coul (°). Wm. Connell and Co Lechigh Valley Coal Co., Lechigh Valley Coal Co., Elliott McClure and Co. Elliott McClure and Co. Solibons Coal Co., North American Coal Co. North American Coal Co. Brookside Coal Co

# TABLE 2-Continued

etr etr	To seminar of steam organization realized by seminary of seminary solutions of polycological and stronger of polycological and stronger of polycological and seminary of polycological and	1.00 44 41 42 42 42 42 42 42 42 42 42 42 42 42 42	1.1 S.N.11 19 16,423 19,1000 1	24 Safe	1 1 10,389 19 15,428 10,568	
Locomotives	теэЯг 	- 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1				
	Total horse power	7 1,060 1,060 1,060 1,060 1,060 1,060	4,411	1001	9.7.6	.#
Boilers	TaluduT	2 00 5 12 18 18 18 18 18 18 18 18 18 18 18 18 18	13 1,235	2 500	30 6,610	
Number of	Horse power	14 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	911			-
	O ou the state of	Lackawanna, Lackawanna, Lackawanna, Lackawanna, Lackawanna, Lackawanna, Lackawanna, Lackawanna,	Lackawanna Lackawanna Lackawanna Lagkawanna	Lackawanna,	Two kowanna	
	Names of Operators and Collieries	Pelaware, La kavanna and Western R. Jr.  of Archbald, Sloam and (entral, Continental), Dodge, Hold in, Hampton, Payne, Taylor,	Bellevus wash ry. Hamplan washery. Taylor washery. Pyne washery.	Central Boil-r Plant,	Totals, Austin Coal Co.	Treenwood No 1,

TABLE 2-Continued

	Number of Boilers		Loco	Locomotives	Ils lo		Zuirev	əmui	urface	sot	s
Lackawanna, 6   180   4   14   14   15   15   15   15   15		Total horse power	швэ12	Air Electric	Number of steam engines	Total horse power	Heb squing to redmin of retain of retains of	Capacity in gallons per m	Quantity delivered to signification of parameters.	Number of electric dynam	Number of air compressor
al Co.  Lackawanna, 2 580 6 8 1, Lackawanna, 2 50 6 6 Lackawanna, 2 50 6 Lackawanna, 18 720 1 Lackawanna, 15 600 7 1, Lackawanna, 18 720 1 Lackawanna, 18 720 1 Lackawanna, 18 720 1 Lackawanna, 18 720 1		680 250				526 328		9008	300		7
Co.   Lackawanna,	i	1,330	8		31	1,284	10	2,700	1,650		1
nd Co. Lackawanna, 2 50 6 1	1 -1	1,160	2		22	1,280	60	3,136	2,021		=
Lackawanna,   18   720   1		900	-		96	290	co	1,800	1,200		
Co.   Lackawanna,   18   720   1		950	-		6	390	23	1,800	1,200		
Co. Lackawanna, 3 450 7 Eackawanna, 15 450 7 Eackawanna, 18 540 7 Eackaw	1 150	870			1 25 01	1,000	60	18,000	1,500	1	-
Co. Lackawanna, 3 450 7 Lackawanna, 15 450 7	1 150	1,470			25	1,500	33	18,000	1,500	-	1
18 540 7	<u> </u>	1,140	-		111	819	41	2,500	S00 250		
		1,590	-		8	1,519	70	3,000	1,050		
Elliott, McClure and Co.	1 1	1,150			12		61	2,900	1,800		-

Gibbons Coal Co.		-															
Gilbons mine,	Lackawanna,.		-60+	63	iş.	23	:	:	:	c:	20						
Temple Iron Co.		11	!!				11			-							
Babylon,	Luzerne,	113	120			420 1	1		:	×	1,074	10	5 1,715	800	:	***	
North American Coal Co.		1															
National washery,	Lackawanna,			4	400	400		:	:	-	220	*			:	:	
Brookside Coal Co.		1	1	1					       								
Bro deside washery,	Lackawanna,	:	:	61			:	:		:	:	:			:		
Grand totals,		7	154 6,266	15	75 12,315 18,581	18,581 22	63	53	00	319 15,256	15,256	319 15,256 16 50,224	16 50,224 20,794	20,744	4 7	12	

\*Abandoned June 27.

TABLE 2-Recapitulation

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	63 -1	: :	1		771
	1,630	1,200	1.850	\$	20,784
	16, 423	3, 136 1, 800 18, 000	9.86	1.715	30,234
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	10,389 550 1,284	0250	612,1	1,674	18,256
	106	S) = 15	- · [중점역	· / +	319
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	<u></u>	\$1 m	H :	- : :	61
	9, S76 240 1, 3.10	1,160	1,590 1,150 85	400	18,541
	6,610	1,16 38.1 138.1	1,150	00F	12,315
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	3,176 140 580	1.320	540 .	- 62 - 12 - 13 - 13 - 13 - 13 - 13 - 13 - 13 - 13	6, 266
	중1-81	2163	1: 15	21 : :	154
	Lackawanna,. Lackawanna,. Lackawanna,.	Lackawanna,. Lackawanna,.	Lackawanna,. Lackawanna,. Lackawanna,.	Luzerne, Lackawanna,.   Lackawanna,.	
Pelaware, Lackawanna and Western R. R.	Co., Aust <b>in</b> Coal Co., Delaware and Hudson Co.,	emisylvania, Coal Co. m. Canavil and Co.	Floor, Medure and Co., Fibliors. Coal Co.	Per, ole Iron Co., North American Coal Co., Prookside Coal Co.,	Totals,

Number of Each Class of Employes at Each Colliery TABLE 3.—Fourth Anthracite District, 1903

	Craise to tal inside and outside	656 656 657 756 756 767	4.848	23	196	30	5,074
ide	ebistoo 1319.	147 180 120 180 180 183	1,170	\$22.53 \$2.55	174	000	1.371
Outs	All other employes	8232428	Ç	\$45 12 13 13 13 13 13 13 13 13 13 13 13 13 13	132	17	049
ployed	Destablished and clerks	64 51 64 67 00 54 67 63	18		2		20
is Em	State by Rens (men)	28 32 13 c 5 8	132		9		138
Persor	Slute profess (boys)	126 12 02 4 13 14 18	401	8 P 12	14		415
Occupations of Persons Employed Outside	Engineers and firemen	mr-sr-brish	71	00-401	10	11	36
patier	Blacksmiths and carpenters	6-10 C 0 20 10 V 1-	46	M44	9		걊
Ocen	nemonol shirth()	กมคกสองใช้	11		4	¢1	17
	əbizni int.T	86.4.4.4.3.6.88 11.7.3.6.88	3,678	5.91-	22		3,700
ide	All other employes	4 :0788.84.a	202	00 10	13		218
suI pa	Company men	320 4 a a a a a	315	10	ro.		:220
nploye	ьпирин	ତୀ ହେବା ଅପ୍ତମ ହୋଇତା	2				0.7
Persons Employed Inside	Decr-beys and helpers	#886-61-41	16.			-:	109
Pers	siennur bine sievird	£6.8833304	40.7				467
Occupations of	Miners' laborers	54555555	1,263				1,266
cupati	stank	\$\$25888E	1.257		П		1,258
000	stusisise bus sessod erift	\$7.17.00 mm 63.02 mm 60	19.1	HITT		:	27
	nomorol onim instalast.		13				I.O
	угіне тотетреп	HOLHECHE,1	17	-	00	:	1 55
	County	Lackawanna, Lackawanna, Lackawanna, Lackawanna, Lackawanna, Lackawanna, Lackawanna, Lackawanna,		Lackawanna, Lackawanna, Lackawanna,	Lackawanna,.		
	Names of Operators and	Delaware La-kuwanna and Western R. R. Cu. Archbald. Sloan and Central, Continental. Continental. Hadden. Hadden. Pyma. Taylor,		Bellevue washery Hampton washery Taylor washery, Pyne washery,	Central boiler plant,	Totals,	

								** 1 ***		· · · · · · · · · · · · · · · · · · ·							
153	814	240	1,054	1,082	138	152 215	367	197	- 6	512	1,205	13	64	263	61	ક	10,458
20	1224	12	8.4	53	150	E S	1:1	1 22	6	167	SNS.	178	1.5	3	81	8	2.876
61	143	30	176	192	98	15.0	e1	83	â	35	12	49	V.	12	157	10	1,261
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oc.	1 20	7	t→ 23	18	1 3	7		5110	E	82	10	ลิ	-			-	120
9	98	t + 7.1	63	67	7	- 8	9.	43	12	8.4	109	91	10			***	S
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103	590	168		7.58	823	S 63	506	42.5	623	396	917	C.5	150	267			1,150
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6	17	14		212	24	9 .	87	58	74	53.53	86	27	2	15			0.29
	1.0	П		9	7	01	ा ।		10	961	8	-		61			22
	39	4		43	2	£ → F.5	12	60.01	5	100	30	101		ę			7000
18	68	ē1		110	33	92	51	88.3	100	52	123	10	4	1 88			995
28	196	56		200		35.	13	333	140	178	315	100		27			2,465
07	210	-11		S		급유	92	28 31	927	200	346	130	120	110			2,789
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	01			63	03		÷1		21		21	-	-	1			85
Lackawanna,.	Lackawanna,.	Lackawanna,	Lackawanna,.		Lackawanna,.	Lackawanna,. Lackawanna,.		Lackawanna		Lackawanna,. Lackawanna,.		Lackawanna,.	Lackawanna,.	Luzerne,	Lackawanna,.	Lackawanna,.	
Austin to al Co.	Delaware and Hudson Co.	Spring Brook,	Greenwood washery,	Totals,	Pennsylvania Ceal Co.	Wm. Connell and Co. Meadow Brook tunnel, National,	Totals,	Lehigh Valley Ceal Co. William A. Lawrence,	Totals,	Jermyn and Co. Jermyn No. 1. Jermyn No. 2,	Totals,	Elliott, McClure and Co. Sibley,	Gibbons Coal Co.	Temple Iron Co.	North American (Voal Co. National Washery,*	Brookside Caal Co. Brookside washery,	Grand tolals,

\*Abandoned June 27.

TABLE 3- Recapitulation

	Grand total inside and outside	1,082 1,082 1,082 1,082 1,205 1,205 2,25 2,25 2,25 2,25 2,25	10,458
side	Total outside	1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00	2,876
1 Outs	7]] other employes	42 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	1,261
ployed	Book-keepers and clerks	0 0 ⊔ 40103440100 ∺	7
Occupations of Persons Employed Outside	Slate pickers (mem)	88 0 1 2 4 9 E 9 L	317
Persor	Slate pickers (boys)	415 667 109 109 10	873
Jo st	Engineers and dremen	24000000000000000000000000000000000000	121
patior	Blacksmiths and carpenters	30000000000000000000000000000000000000	<u>શ</u>
Occu	nəmərol əbizinO	<u>с</u> ноенопення	?;l
	əbizni İstoT	3,700 103 1103 1758 1758 1758 177 1847 1947 1957 1957 1957 1957 1957 1957 1957 195	1,582
ide	All other employes	21 4 2 1 1	300
Occupations of Persons Employed Inside	Сотрапу теп	E 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	029
mploy	Pumpmen	9H9H81170014 81	55
ons E	Door-boys and helpers	S 34~ Il a \$13 a	227
Pers	Drivers and runners	64 2.11 6.21 6.21 6.21 6.21 6.21 6.21 6.21	686
ons of	Miners' laborers	25.28 25.25 25.25 1.50 1.50 1.50 1.50 1.50 1.50 1.50 1.5	2,465
cupat	Miners	1,258 440 281 281 281 281 281 281 130 110	9,789
ŏ	Fire bosses and assistants	61 : 00 : 00 : 00 : 1 : 1 : 1 : 1	10
	nemerol enim tanksissk	তে লল গগেগে ল	#
	Mine foremen	Secondonales ::	6
	County	Lackawanna, Lackawanna, Lackawanna, Lackawanna, Lackawanna, Lackawanna, Lackawanna, Lackawanna, Lackawanna, Lackawanna, Lackawanna, Lackawanna,	
	ors and	anna and Co.,	
	of Operate	Lackawanna R. Co., R. Co., d Hudson Co., coal Co., and Co., and Co., co., co., co., co., co., co., co., c	Totals,
	Names of Operators and Collieries	Delaware, Lackawanna Western R. R. Co., Austin Coal Co., Pennsylvania Coal Co., Vin. Connell and Co., Lehigh Valley Coal Co., Lehigh Valley Loal Co., Lehigh Valley Loal Co., Temple Iron Co., Te	Totals,

TABLE 3-Continued

	Signol	aennaene 	6.5	11.7	1 48	216	1 3	1 53	156	- 500
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	TadmsvoZ.	, this abes	17.5	1 3	1 31	146		2121	. 1	12.5
reaker	$\mathbb{I}_{\{i,j\},i^{\ell}\}}$	E22/218	17.	2	1 22	2		1 //	,	11.8
h in B	a.aqmər Eş	93-103-01 45-45-45	10.0	1 3	25	16.5		, 1 — por	=	<u>~</u>
Number of Days Worked Each Month in Breaker	1suguv	តិតពីន៍ពីពិទីព	11.12		. 54	77 A		ne	22	F
red Eac	ylut.	1115111555	15.12		na Ea	5.1		==		: []
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of Day	уау.	201554855 201554855	- <u>21</u>	5	1 128			==	=	ā
Number	ItalA	1915 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	21 21	1 16	- 	207		122	1.	19.9
	үгчү	2011 2011 2011 2011 2011 2011 2011 2011	13.4	1 11	5 5	18.3	1 62	2121	2	i ĉî
	Zaunade)	84189148 84189148	18.9	9.1	15.00	27.5	22	i i i	22	61 61
	Arenuer	agailaga agailaga	1000	10.4	\$ 51 \$ 10 \$ 11	0.7	12	16.4	15,4	63
	County	Lae kawanna. Lae kawanna. Lao kawanna. Lao kawanna. Lae kawanna. Lae kawanna. Lae kawanna.		Laekawanna,.	Luckawanna, . Luckawanna, .		Lackawanna,.	Liekawanna		Laekawanna,.
	Names of Operators and Cliffes	Protaware, Lackawanna and Western R. R. Co. Archbatd. Shoot and Central, Contrastal, Lodge, Hadden, Hampton, Hampton, Taylor,	Average s,	Austin tunnel,	Openwood Nest and Hudson Co. Spring Brook,	Averages,	Old Forge,	Wm. Connell and Co. Meadow Brook tunnel, National,	Averages,	William A., Lebish Valley Coal Co.

TABLE 3-Continued

	zigioT'	213	223	217	196	201	244	178	
	December	14.1	15.0	16	14.5	17.9	56	10.9	15.7
	November	11.9	12.3	17	15.5	12.4	21	00	13.8
reaker	October	11.4	11.6	1 22	2	12.3	61	9.9	11.6
th in D	September	16.5		119	18	17	12	15.1	16.5
ch Mon	jsuguA	19.8	20.1	60 t-	15	20.7	13	17.8	16.7
Number of Days Worked Each Month in Breaker	ylut	19.1	20.6	£1 00	16	20.5	14	16.3	1.7
ys Wor	əunf	18.1	18.9	6161	8}	20.7	19	15.9	17.6
of Day	угау	18.1	19.1	23	50	18.6	90	15.8	17.2
Number	lingA	19.1	19.5	119	18	œ	5	17.3	16.3
	Матећ	21	22	10.10	15	14.9	19	17.9	15.9
	February	20	21.2	16	16	17.9	61	14.5	16.5
	January	23.4	24.3	19	18.5	21.7	26	17.5	19.6
	County	Lackawanna,.		Lackawanna,. Lackawanna,.		Lackawanna,.	Lackawanna,.	Luzerne,	
	Names of Querators and Collieries	Lawrence,	Averages,	Jermyn No. 1, Jermyn and Co. Jermyn No. 2,	Averages,	Elliott, McClure and Co.	Gibbons Coal Co.	Temple Iron Co.	Averages,

TABLE 3- Recapitulation

County  County  Prember  Prember  Ingust  Prember  Ingust  Prember  Ingust  Prember  Ingust  I	Number of Days Worked Each Month in Breaker	Break (1964) (1964) Articology	TSTE Got Schember	ach Most 1992 1992 1992 1992 1992 1992 1992 199	Para Sara July B	anut. 112 1 1 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	9 YeW 2.x 12887		fortsM 전문문문명합국	Tebruary Section of Section 1997	Variate Section of the Control of th	County  Lackawanna Lackawanna Lackawanna Lackawanna Lackawanna Lackawanna Lackawanna Lackawanna Lackawanna Lackawanna Lackawanna	
Western R. R. Co., Lackawanna, 23.7 18.9 18.4 21.2 21.2 21.4 21.9 21.4 19.2 18.5 18.7 18.7 18.7 18.7 18.7 18.7 18.7 18.7	Western R. R. Co.   Lackawanna,   25.7   18.9   18.4   21.2   21.4   21.9   21.4   19.5   10.5   1	81 m	15.1	17.8	5. 6. 1	12.0	3   S	17.3	17.9	14.5	17.5	Luzerne,	Temple from Co.,
N N N N N N N N N N N N N N N N N N N	Ounty County Andrey And	5.2.0.1 NII-55間 2.5.0.1 NII-55間 2.5.0.1 NII-55間 2.5.0.1 NII-55間 2.5.0.1 NII-55間 2.5.0.1 NII-55間 2.5.0.1 NII-55間 2.5.0.1 NII-55間 2.5.0.1 NII-55間 3.5.0.1 NII-55間 3.5.0.1 NII-55間 3.5.0.1 NII-55間 3.5.0.1 NII-55間 3.5.0.1 NII-55間 3.5.0.1 NII-55間 3.5.0.1 NII-55間 3.5.0.1 NII-55 3.5.0.1 1.93 21.82	12 00 E 55 5 E 5 E 5 E 5 E 5 E 5 E 5 E 5 E	2 2 4 2 5 3 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5	10 21 22 22 22 22 22 22 22 22 22 22 22 22	11 8 8 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	## 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5	82.82.83.83.84.84.84.84.84.84.84.84.84.84.84.84.84.	8 9 7 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	25 1 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	Lackawanna. Lackawanna. Lackawanna. Lackawanna. Lackawanna. Lackawanna. Lackawanna. Lackawanna. Lackawanna. Lackawanna. Lackawanna.		
зеешрет.			Break Todobot Six Exercises Six Six Six Six Six Six Six Six Six Six	11	ach Month in Breaker  23.4	10   10   10   10   10   10   10   10	10   10   10   10   10   10   10   10	Tof Days Worked Each Month in Breaker   Man	Number of Days Worked Each Month in Breaker    21.2   21.2   21.3   21.4   21.5   21.4   21.5   21.4   21.5   21.4   21.5		4-7-674 делем делемана делема делемана делема делемана делемана делемана делемана делемана делемана делемана делемана делемана делема делемана делемана делемана делемана делемана делемана делемана делемана делемана делемана делемана делемана делемана делема делемана делема д делема д делема д делема д делема д делема д д д д д д д д д д д д д д д д	Tobruary  Hearing Transmission of the formulary  f the formulary of the formulary of the formulary of the formulary of the formulary of the formulary of the formulary of the formulary of the formulary of the formulary of the formulary of the formulary of the formulary of the formulary of th	7. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1.

TABLE 4.—Fourth Anthracite District, 1903 Fatal Accidents in and about the Mines

Nature and Cause of Accident in Brief	AA	Fately injured by falling down ashtower, a distance of 64 feet.  tower, a distance of 64 feet.  Killed by fall of rock in face of gangway in Red Ash vein.  Killed by trip of empty cars,  Durned by explosion of gas in old worklings.  Killed by leaded trip of cars.  Killed by being kicocked down on a sharp price of coughly a falling purp.	refacts, must an option of the forward warms Hospital, warms Hospital, hopping of sale grantly injured by fall of roof in face of sangway. Died same night, ficked in stomach by a mule. Died next Fatally squeezed between car and rib. Fatally squeezed between car and rib. Fatally injured by heing caught under props falling from railroad cars. Died March 15,
County	Lackawanna, . Lackawanna, . Lackawanna, . Lackawanna, .	Lackawanna, Lackawanna, Lackawanna, Lackawanna, Lackawanna,	Lackawanna,. Lackawanna,. Luzerne, Lackawanna,.
Name of Colliery	Jermyn No. 1,  Taylor,  Taylor,  Sibley,	Hampton boiler plant. Villiam A, Jemnyn No. 1, Old Forge No. 2, Bahylon, Maddow Prodel	
Number of orphans		H 10 10H 60	
swobiw to redmuM			i <u>i i</u> i i i i i i i i i i i i i i i i i
Married or single	i Kin in	R. K. K. K. K. K.	
	ដ ដាន ។	8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8	
nothequesoO	Dock-boy, Time-keeper, Machin ist foreman. Laborer,	Ashma Laborer Laborer Miner, Miner,	Laborer, Driver, Outside la-
Valionality	Polish, Welsh, American, Polish,	Slavonian, Italian, Polish, Polish, Polish,	Polish, American, American, Italian,
Name of Person	James Mera,  Edward David,  Charles Reed,  John Conosky,	John Hightosh, Joseph Paesong Frank Borack, Rous Vender, Edward Nebrasi George Mellis,	
Insplose to sted	उ सम्	18 22 26 	
	Jan.	Feb.	March

These men were fatally of roof on side of gad died March 16. Fatally squeezed between of Killed by fall of roof on mark Killed by fall of roof on mark Killed by fall of roof in in Big vein. Killed by fall of coal in fall of well in Ryck vein.			Someorgel between caus. Killed by being squeezed between car and rib. Fatally injected by Gall of roof. Killed by fall of benry coal in face of chamber in Clask very coal in face of class of case of		in Chark wein. Killed by fell of reef in face of chamber. Killed by fell of reof in face of chamber. In Red Ash wein. Killed by fulling down shaft a distance of 30 feet.
Lackawanna, Lackawanna, Lackawanna, Lackawanna, Lackawanna,	Lackawanna, Lackawanna, Lackawanna, Lackawanna, Lackawanna,	Lackawanna, Lackawanna, Lackawanna,	Lackawanna,. Lackawanna,. Lackawanna,. Lackawanna,.	Laekawanna, Laekawanna, Laekawanna,	Lackawanna, Lackawanna, Lackawanna,
Meadow Brook tunnel, Brook Meadow Brook tunnel, Archbald, Lemn'n No. 1, Archbald, Archbald, Continental,	Taylor, Spring Breek, Spring Brook, Old Forge No. 1,	Paylor, Pyne, Continentel, Pyre,	Archbald,	Dodge, Meadow Brook tunnel. Hampton washery, William A	Continental,
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e e !!e ! e	<u> </u>		e : :e		
M M W W M M	i si si si i	M. M.	M.S. S.M.	S. K. K.S.	ળં ળં ળં
14 88 11 13 4 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8	8 2 2 2	28 39 34		31 45 60 21	8 8 8
Foreman, Laborer, Plane man, Runner, Miner, Miner,	Helper,  Driver, Miner, Laborer,	Laborer, Laborer, Miner, Loader,	Carpenter, Laborer, Laborer, Laborer, Miner	Miner, Miner, Laborer, Laborer,	Miner, Miner,
American,  American,  Welsh,  English,  Welsh,	American, English, Irish,	Russian, Polish, Polish,	American, Irish, Polish, Polish,		English, Italian, Polish,
16 Julian Cooper,	Patrick Shea. Winfield Deck John Wilson, .	John Swist, Stanley Kaudufer, Frank Penkoski, John Loyko,	Oliver Wilson, William Deskin, Joseph Zuhurn, Theodore Bodiski, Joskin Thomas,		Eli Jones.  Prederico Pacifico,  Powell Adomovitch,
		13 17 20		2.83 85 H	肾 章 云
April May	June	July	Aug. Sept.	Oct. Nov. Dec.	

TABLE 5.—Fourth Anthracite District, 1903 Non-Fatal Accidents in and about the Mines

	Naturend Cause of Accident in Brief	Leg fractured by fall of roof.  Foot, injured by being caught under bumper of car.  Leg fractured by haulage rope, inside.  Leg fractured by haulage rope, inside.  Lip gractured by haulage rope, inside.  Signity injured by an explosion of gas.  Back and spine mijured by fall of roof.  Skull fractured by mine car.  Gistance of 60 feet.  Action of 60 feet.  Thish injured by railroad car underneath the breaker.  Thish injured by railroad car underneath the breaker.  While in the act of oiling conveyor line his hand was caught, cutting off three hingers.  Thumbe crushed while spragging a car.  Leg fractured by falling under loaded trip of cars.  Thumbe crushed while spragging a car.  Leg fractured by falling under loaded trip of cars.  These men were burned and wounded by a premature blast.  Leg fractured by fall of roof.  Leg fractured by fall of roof.  Leg fractured by premature blast.  Leg fractured by premature blast.  Leg fractured by premature blast.  Leg fractured by premature blast.  Leg fractured by premature blast.
MINES	County	Lackawnana, Lackawanna,
Il and about the Mines	Name of Colliery	Jermyn, I'yne, Dodge, Dodge, Holden, William Ao, I, Austin, Pantylor, Pyne, Greenwood No, 2, Jermyn No, 1, Sibley, Meddow Brook tunnel, In Holden, Helden, Sibley, Meddow Brook tunnel, I'den,
11021	Married or single	
ciae	93 Y	84 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5
Non-Farai Accidents in	nollaquooO	Miner, Headman, Fire boss, Miner, Track man, Miner, Runner, Runner, Driver, Oiler, Driver, Miner, Mi
	Vationality	Polish, German, Welsh, Polish, Polish, Polish, Polish, Polish, Polish, Ravonian, Hungarian, English, Slavonian, Hungarian, American, Italian, Polish, American, Polish, American, Polish,
	Name of Person	Andrew Grush, Gotlieb Cofink, David Edwards, John Jakolski, Thomas Rusko, Matt Sullivan, Alex Obbonic, Anthony Kozlofski, Powell Gunla, Andrew Guall, Daniel Evans, Peter Coyne, Harry Smith, Frank Lebetski, William Cosmark, Joseph Malterta, Ernest Pergini, Joseph Zavembo, Simon Sabatka, Martin Browani, Janes Conkey,
	Date of accident	Jan. 55 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8

Right arm and left leg fractured by fall	of top coal.	Jured by a rail of top coal. Both arms injured by a cap exploding in	his hand. Collar bone fractured by falling over rail.	ing at 1000 of smarc. Hands scaled by boiling water. Both legs fractured by fall of roof. Leg fractured and scalp wounded by fall	of roof.  Back and head injured by fall of roof. Injured by fall of roof.  Arm fractured and three ribs cracked by	fail of root.	bumper of car,	Collar bone fractured by being squeezed	Leg fractured by fall of roof.	Hip dislocated by being squeezed between	cars. Ankle sprained by being caught under	bumper of ear. Hands and face hurned by powder.	Light States by found water. Leg fractured by fall of boney. Leg fractured by fall of boney.	Ribs fractured by plast.  Arm fractured and ankled dislocated by a	Slightly injured by being knocked down	Arm and be in some of top coal. Injured by being dragged along main road	by a loaded trip of cars. Hands and face slightly burned by pre-	Leg fractured and ankle bruised by pre-	mature order. of on face and hands by explosion of eac	Log and ribs fractured by a fall of coal, Hip migured by a fall of rook. These men were injured by running into a trip of cars coming down a plane. Log fractured by a falling prop. Back speamed by a falling prop. of rock,
Lackawanna,., Rig	Lackawanna,. Sca	Lackawanna,. Bot	Lackawanna,. Col	Lackawanna,. Hai Lackawanna,. Bot Lackawanna,. Leg	Lackawanna, Bac Lackawanna, Inju Luzerne,	Lackawanna,, Foot	Lackawanna,. Foot	Lackawanna,. Col	Lackawanna, Leg	Lackawanna,. Hij	Lackawanna,. An	Laekawanna, Ha		Lackawanna, Rit Lackawanna, Ari	Lackawanna, .   Slis	Lackawanna,. Arr Lackawanna,. Inj	Lackawanna,. Ha	Lackawanna, . Les	Lackawanna,. Bu	Lackawanna Los Lackawanna Hii Lackawanna   71 Lackawanna   12 Lackawanna Los Lackawanna Los Lackawanna Go
Fyne,	Central,	Jermyn No. 2,	Pyne,	Greenwood No. 1, Jermyn No. 2,	Taylor, Jermyn No. 1, Babylon,	National,	William A,	Pyne,	low Brook tun-	ned,	Central,		Pyne,	Lawrence,	William A,	William A Dodge,	Dodge,	Indge,	Holden,	Taylor,
M. F	M.	M. J	20.	S. H.S.	M.N.S.	vi vi	20	vi	M. N	υż	si.		in K		M.	w w	M. I	M. I	M. I	ZZWWZZ
22	44	20	32	ននិន	22 12 18	18	21	0.1	(-9	61	10	201	13 51		97	25	. 39	7	100	\$44848
Laborer,	Laborer,	Miner,	Laborer, ,	Fuelman, Laborer, Laborer,	Laborer,	Driver,	Runner,	Laborer,	Laborer,	Footman,	Runner,	Miner,	Miner,	Miner,	Miner,	Laborer,	Miner,	Laborer,	Miner,	Laborer, Miner, Miner, Laborer, Miner,
Polish,	Polish,	Italian,	Irish,	American,	Polish, Istalian, American,	American,	American, 1	Swiss,	Irish,	Polish,	American,		Swiss,		Italian,	Italian,	Polish,	Polish,	Polish,	Polish, Italian, Italian, Italian, Irish,
26 Jacob Sitkie,	Alex. Stannick,	Tony Combarto,	Patrick Hayes,	William Gallagher, Joseph Bastic, John Dudek,	Peter Kopenski, Rosa Schina, Robert Metcafe,	John Burke,	Nicholas Sossing,	Michael Shill,	John Breen,	Joseph Sinkner,	Ralf Dunn,		Joseph Fisk, Alex. Hoover, Michael Garb,	William Rowla	John Carnavally,	Charles Stralley, James Bartley,	Martin Peigmski,	John Stone,	John Coba,	Michael Supper. Nicolo Cardoman, Joseph Sementza, Gastano di Antonis, Thomas Carey, Alex, Czapolicki,
26	\$3	83	-74	s 10 11	14 16	97	31	C 1	00	9	[	1	. v. v.	5. 0[	19	12.5	23	6.1	66	er er er re
			March					April												May

TABLE 5-Continued

Nay 6 Andreo Niddrick, Siavonian, Driver, 16 S. H. Men, 16 Lackawanna, Tree risk freezened and threse of Areident in Brief, Coontry (1976). The Coontry (1976) of the Coontry (1			0 44 54 00 54
Stanley Scalet,   Polish   P	Nature and Cause of Accident in Brief		concussion of a cave.  These men were slightly burned on and hands by an explosion of gas. Injured internally by a fall of rock. Jaw bone fractured by a lever at heast breaker. Same and to send between two cars at foo shaft. Leg fractured by being caught under tipple on head of breaker. Head and face bruised by a fall of r Head and face bruised by a fall of r roof.
Name of Person   Name of Person   Name of Person   Name of Person   Name of Person   Name of Person   Name of Person   Name of Person   Name of Person   Name of Nam	County		
Name of Person   Name of Person   Name of Person   Name of Person   Name of Person   Name of Person   Name of Person   Name of Person   Name of Person   Name of Person   Name of Name of Person   Name of N	of	H. Iden, Dodge, Dodge, Continental, Archbald, Hodge, Spring Brook, Archbald, Spring Brook, Archbald, Spring Brook, Tarboy, Taryor, Tar	Jermyn No. 2, Jermyn No. 2, Continental, Holden, Itelden, Pyne, Meadow Brook tun-
Name of Person  6 Andro Niddick, Slavonian, Driver,  9 John R. Lewis, Welsh, Driver,  13 Thomas Edwards, Welsh, Driver,  14 William J. Bowen, Polish, Laborer,  5 George Stolick, Dolish, Laborer,  15 Joseph Snopic, Polish, Laborer,  16 Luke Grady, Welsh, Laborer,  17 Andrew Beshinck, Polish, Laborer,  18 Adam Viskuski, American, Miner,  19 Andrew Beshinck, Polish, Laborer,  10 Minhar Toniask, Polish, Laborer,  11 Andrew Beshinck, Polish, Miner,  12 Adam Viskuski, Polish, Miner,  13 Adam Viskuski, Polish, Miner,  14 William Poniask, Polish, Dish, Laborer,  15 Frank Friedle, Polish, Polish, Dish, Daborer,  16 Frank Friedle, Polish, Polish, Daborer,  17 Michael Bokoski, Polish, Dolish, Laborer,  18 Joseph Zaremba, Italian, Laborer,  19 Joseph Zaremba, Italian, Laborer,  10 Mazarino Palazini, Italian, Laborer,  10 Mazarino Palazini, Italian, Laborer,  10 Mazarino Palazini, Italian, Laborer,  10 Mazarino Palazini, Italian, Laborer,  10 Mazarino Palazini, Italian, Laborer,  10 Mazarino Palazini, Italian, Laborer,  10 Mazarino Palazini, Italian, Laborer,  11 Mazarino Palazini, Italian, Laborer,  12 Joseph Zaremba, Italian, Laborer,  13 Minhar Palazini, Italian, Laborer,  14 Minhar Palazini, Italian, Laborer,  15 Joseph Zaremba, Italian, Laborer,  16 Laborer, Laborer,  17 Minhar Palazini, Italian, Laborer,  18 Joseph Zaremba, Italian, Laborer,  19 Joseph Zaremba, Italian, Laborer,  10 Minhar Palazini, Italian, Laborer,  10 Minhar Palazini, Italian, Laborer,  11 Mazarino Palazini, Italian, Laborer,  12 Minhar Palazini, Italian, Laborer,  13 Minhar Palazini, Italian, Laborer,  14 Minhar Palazini, Italian, Laborer,  15 Minhar Palazini, Italian, Laborer,  16 Minhar Palazini, Italian, Laborer,  17 Minhar Palazini, Italian, Laborer,  18 Minhar Palazini, Italian, Laborer,  19 Minhar Palazini, Italian, Laborer,  10 Minhar Palazini, Italian, Laborer,  11 Minhar Palazini, Italian, Laborer,  11 Minhar Palazini, Italian, Laborer,  12 Minhar Palazini, Italian, Laborer,  14 Minhar Palazini, Laborer,  15 Minhar Palazini, Laborer,  16	Married or single	WEENW EWEERWEE ENE WE W	ww k w wkkk
Name of Person  6 Andro Niddick, Slavonian, Driver, Sacopen Sheehan, Irish, Runner, Melsh, Driver, Joseph Jonas, Polish, Laborer, Polish, Laborer, Bording, District, Dolish, Laborer, Bording, Driver, Dolish, Laborer, Bording, Driver, Dolish, Laborer, Bording, Driver, Dolish, Laborer, Bording, Driver, Dolish, Laborer, Dolish, Laborer, Dolish, Laborer, Dolish, Laborer, Dolish, Laborer, Millam Porlask, Polish, Laborer, Driver, Dolish, Laborer, Dolish, Driver, Dolish, Laborer, Dolish, Driver, Dolish, Driver, Dolish, Laborer, Dolish, Driver, Drish, Driver, Dolish, Driver, Drish, Driver, Dolish, Driver, Dolish, Driver, Dolish, Driver, Drish, Drish, Drish, Drish, Drish, Driver, Dolish, Drish, Drish, Drish, Driver, Dolish, Drish, Drish, Driver, Dolish, Drish, Driver, Dolish, Driver, Drish, Driver, Drish, Drish, Driver, Drish, Driver, Drish, Drish, Drish, Drish, Driver, Drish, Drish, Drish, Drish, Driver, Drish, Drish, Drish, Driver, Drish, Drish, Driver, Drish, Drish, Drish, Driver, Drish, Driver, Drish, Dris	93A		
Andrew Beshintek, Polish, Razarino Palazini, Italian, Italian, Italian,	noitequosO	Driver,  Runner,  Driver,  Fire boss,  Fire boss,  Priver,  Laborer,  Miner,  Laborer,  Miner,   Water bailer, Nater bailer, Laborer, Breaker machinist Footman, Headman, Laborer,	
trace of accident a way of white ways was water was a we-	YillanoilaV	Slavonian, Irrish, Welsh, Welsh, Welsh, Polish, Polish, Polish, Polish, Polish, Polish, Resh, Resh, Resh, Resh, Resh, Resh, Polish, Po	
tracification of the state of t	Name of Person		Andrew Beshinick, Michael Pinta. Michael Bokoski, Wilviuan Fairclough, Frank Friedle, Casper Imdorf, Joseph Zaremba,
	Date of accident		

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<u></u>		크게 크게 지르는 그리	Of Food,  Two bose cut off by cars, Compound fracture of leg by cars, Am fractured by being thrown against a	Collar to me fractured; in trying to sprag	Estigator. Kicked in abdomen by mule while con-	year Ta	burned by blast Log fractured by stene rolling down of	gon, ill fact of chamber. Arm badly crushed by falling under rail-	Back bruised by a "rock bell" fulling on	Hand bruised by baving it caught under	J. (	by being squeezed between cars and rda, Controller of albow and shoulder by fall	Determined ship hence and cut on less.  Facts cut and benieved by fall of roof.  Facts henrised by fall of roofs.  Facts henrised by fall of roofs.  Facts henried and body businessed by heing causely by heing	staff and string reforming coal pockets. Foreband, eyes and an minimod by charge	Face and mouth out by being kicked by a	neme. Log fractured by being struck by rope at foot of plane
Lackawanna,.	Lackawanna,. Lackawanna,. Lackawanna,. Lackawanna,.	Lackawanna, Lackawanna, Lackawanna, Tackawanna, Lackawanna, Lackawanna, Lackawanna, Lackawanna,	Lackawanna,. Lackawanna,. Lackawanna,.	Lackawanna,	Laekawanna,	Lackawanna,. Lackawanna,.	Lackawanna,	Lackawanna,	Lackawanna,	Lackawanna,	Laekawanna,. Laekawanna,.	Lackawanna,	Laekawanna, Laekawanna, Laekawanna, Laekawanna,	Lackawanna,	Lackawanna,	Lackawanna,
Spring Brock,	Dodge, Greenwood No. 2, Holden, William A, Continental,	Greenwood No. 1, Dodge, Dodge, Continental, Jennyn No. 1, Jennyn No. 1, Archbald, Archbald,	Greenwood No. 1, Continental,	Гуле,	Jermyn No 2,	Lawrence, Spring Brock,	Lawrence,	Bellevue washery,	Dodge,	Greenwood No. 1, .	Sloan,	Dodge,	Archbald,	Jermyn No. 1,	Hampton,	Holden,
vi	wwizww	EKNENEN	v. ≅ v.	v.	υż	N. N.	vi	M.	M.	M.	v. 7.	M.	HHHH	M.	ď.	7.
121	881812	8344+888 834+4888	ឧត្ត	81	17	8.8	10	65 F=	13	22	814	23	ស្នង	\$3	-1	8:
Runner,	Driver. Laborer, Miner, Plane man, Laborer,	Runner, Laborer, Miner, Laborer, Rock man, Miner, Alborer,	Runner, Runner, Slope man,	Laborer,	Driver,	Laborer,	Miner,	Loader,	Miner,	Pump man,	Driver,	Miner,	Headman, Miner, Leader,	Miner,	Driver,	Footman,
American,	Irish, Polish, Arnerican, Polish,	Irish, Polish, Polish, American, English, Welsh, Irish,	Irish, Welsh,	Polish,	Austrian,	Irish,	American,	Polish,	Welsh,	Welsh,	American, Irish,	Lithuanian	Russian, Welsh, American,	I' lish,	Amerian, .	Trish.
George O'Boyle,	Charles Fahy, Frank Condroski Isaac Fyans, Janer Shirts, Joseph Baroski,	Joseph Murray, Petz Jacob, Michael Shincavish, William tooper, Joseph Chapman, Joseph Lowis, Joseph Hopkins, Joseph Popkins,	Michael Kink, Harry Smith, Michael Conoboy,	John Nooboloski,	Paul Mzumick,	Martin Waters,	Robert Comer,	John Ruderwiski,	Joseph Williams,	Edgar Davis,	Lonard Schlager,	Joseph Bukas,	Andrew Guuso, Jeseph Hughes, Thomas Y. Jones, Joseph Dyson,	Jeseph Crowchuck,	Fred. Lentz,	Thomas Jeffries,
10	111 52 52	%Eddadaga	2222	97	9	1- 51	56	10	15	1:3	10	261	61 cJt- ∺	21	ĉi	<del>21</del>
	Sept.				Oct.			Nov.					Dec.			

# Accidents by Falls of Coal, Slate and Roof

During the year 1903, 42 persons were killed or fatally injured, and 117 were more or less seriously injured in and about the mines of the Fourth Anthracite District. Of the above number 19 were killed or fatally injured, and 42 seriously injured by falls of roof and coal. These are by a large percentage the most numerous class of accidents and are in the majority of cases due to the miner returning to the face of his working place in the powder smoke to see the results of a blast, when the roof or coal which had been loosened by the blast, and which cannot be seen, owing to the smoke, falls upon him, causing fatal or serious injury.

A number of accidents by falls occur because the roof and face have not been examined and sounded in order to ascertain whether er not anything is loose, so that it can be pulled down or secured with props. Props are often discharged by blasts from under the roof and large pieces of coal that are more than half loosened are left hanging and fall after the miner returns. In some cases where props have been discharged laborers have been fatally or seriously injured by falls of coal or roof due to the miner permitting them to go to the face to load a car of coal without first ascertaining the condition of the roof and overhanging coal. If all the miners were to use more judgment and be more careful after firing a blast before returning to work, a large percentage of the accidents by falls of roof and coal would be averted.

# Accidents by Explosion of Gas

Three were fatally and four seriously injured by explosion of gas. The explosion at the Taylor colliery of the Delaware, Lackawanna and Western Railroad Company, on the morning of January 14, by which Edward David was instantly killed and Charles Reed was so seriously injured that he died a few days later, was the result of the water rising unexpectedly at the foot of the up-cast shaft, causing a quantity of gas to accumulate in the return air-way. Reed and David were going to examine a pipe line, David opened a trap-door leading to the air-way, his naked light came in contact with the gas and a fearful explosion occurred. Roas Vender was fatally burned by gas in Old Forge No. 1, on February 5, as the result of his own carelessness. It appearing from information elicited at the investigation that he went into the old workings after being warned by other men not to go. His naked light came into contact with a small body of gas, burning him severely, from which he died 14 days later.

Those slightly burned were burned by the men igniting small

quantities of gas in face of working places. This frightful source of accidents in the mines, the causes, means of prevention, or plans by which their frequent occurrence might be reduced have been so exhaustively treated in former annual reports by the several mine inspectors, that scarcely anything new can be said about the subject.

# By Blasts and Powder

There were 3 fatal and 14 serious injuries from explosions of blasts and powder. Each accident resulted from inexcusable recklessness on the part of the victim. Two of the fatal accidents were due to the miners going back to the hole too soon, not giving the blast time to explode, and the other was due to the victim going to a keg of powder with his lighted lamp on his head, a spark falling from his lamp into the powder which exploded.

Another chief cause of such accidents is the miners taking the butt end of the drill to drive the cartride in the hole. The drill striking fire explodes the cartridge, resulting in fatal-or serious injury to the victim. Every miner knows this practice of ramming cartridges with the butt end of a drill to be extremely dangerous, and all will admit it, and yet otherwise careful and intelligent men lose their lives every year by clinging to the dangerous practice.

# By Cars Inside

There were 6 fatal and 30 non-fatal accidents by cars inside the mines during the year. The chief causes of these accidents are as follows:

James Mora, a door-boy at Jermyn No. 1 colliery, was away from his post of duty and fell asleep on side of the gangway and on hearing the trip of cars coming attempted to run ahead to his door, and was struck by the trip, inflicting injuries from which he died the same day.

Frank Borack while walking on tail rope line at Jermyn No. 1 colliery, was run over by trip of cars and instantly killed.

Edward Nebraski while sitting on bumper sliding his foot on the rail at Old Forge No. 2, fell under a trip of cars and was instantly killed.

Harry Moses, a driver at the Babylon Colliery, was fatally injured by being squeezed between car and rib on narrow side of gangway.

David H. Williams, a company man at the Archbald mine while driving out on a gangway with a truck car jumped on the side of the car and was squeezed between car and rib, receiving injuries from which he died the same night.

William Deskin, a laborer at the Archbald mine, while running

a car off the gangway into his chamber, after his light had gone out, was squeezed between car and rib and instantly killed.

The non-fatal accidents from this cause during the year numbered thirty, resulting from being squeezed between cars and between cars and ribs. Several employes were injured by falling under cars, others by spragging cars and riding on bumpers of cars. Drivers and runners are the principal sufferers, and in most cases they bring the suffering upon themselves.

# By Cars Outside

There were three fatal and five non-fatal injuries outside the mines by cars during the year.

Winfield Decker, while trying to stop a runaway team of mules, slipped and fell under a truck, receiving injuries from which he died the same day.

John Loyko, a loader at the Pyne mines, was run over by a box car under the breaker, receiving injuries from which he died on the way to the hospital.

Oliver Wilson, carpenter at Austin mines, was squeezed between cars inflicting injuries from which he died seven days later.

The five non-fatal accidents were due to the victims being caught by cars under the breaker, by car on the head of breaker, by spragging cars, and by falling under railroad cars. With an ever-present and prudent care some of these accidents might possibly have been averted.

### Miscellaneous Causes

Under this head there were 3 fatal and 19 non-fatal accidents, in and about the mines of this district. The loss of life and serious injury were almost all purely accidental. Yet, when we examine the casualty tables and take into consideration the large number therein contained that result from carelessness, it is scarcely to be expected that the prudence which should always govern the movements of the miners will be sufficiently exercised to reduce to any great extent this class of accidents.

## Present Condition of Collieries

While the ventilation and drainage at some mines are not perfect, they have been greatly improved at many of them during the past year. However, on the whole they are satisfactorily ventilated and drained, with a few exceptions. There may be some persons working in local places, in every mine making an opening towards getting air one way or another who are suffering for the time being, but eventually the mines will be well ventilated.

The Delaware, Lackawanna and Western Railfoad Company's mines are kept well in hand. One or two cannot be rated as first class, but there is never any trouble with the mines of this company, for the men in charge of them have always shown a cheerful readiness to comply with the requirements of iaw.

The Delaware and Hudson Company's mines have been greatly improved. They have only three collieries in my district, which are in good condition as far as ventilation and drainage are concerned.

The collieries of the small companies in the district are in good condition as to ventilation and drainage, excepting the following: Austin Tunnell, of the Austin Coal Co., Sibley, of Elliott McClure and Co., No. 4 tunnel, of Wm. Connell and Co., Wm. A., of the Lehigh Valley Coal Co., Jermyn No. 1, of Jermyn and Co. Some of these have been improved during the year.

Burning of the Old Forge Breaker of the Pennsylvania Coal Company

On March 25, 1903, the Old Forgé breaker of the Pennsylvania Coal Company was completely destroyed by fire. The daily capacity of the old breaker was 1,800 tons. A new modern breaker was crected again on the same site, with a daily capacity of 2,500 tons.

The National washery of the North American Coal Company was abandoned June 27, 1903.



# Fifth Anthracite District

LUZERNE COUNTY

Pittston, Pa., February 29, 1904.

Hon. James E. Roderick, Chief of Department of Mines:

Sir: I have the honor to submit my annual report as Inspector of Mines for the Fifth Anthracite District for the year ending December 31, 1903.

The report gives the statistical information as required by law, and also a tabulated and brief description of the fatal and non-fatal accidents that occurred during the year, with other useful information.

Respectfully submitted,

H. McDONALD,

Inspector.

## Fifth Anthracite District, 1903 SUMMARY OF STATISTICS

Number of mines in district,	39
,	39 39
Number of mines in operation,	
Number of tons of coal produced,	4,761,133
Number of tons shipped to market,	4,406,990
Number of tons sold at mines to local trade,	$48,\!177$
Number of tons consumed at mines in generating steam	
and heat,	$305,\!966$
Number of persons employed inside the mines,	8,169
Number of persons employed outside,	3,357
Number of fatal accidents inside the mines,	37
Number of tons produced for each fatal accident inside,	128,679
Number of persons employed per fatal accident inside,	221
Number of fatal accidents outside,	10
Number of persons employed per fatal accident outside,	336
Number of wives made widows by fatal accidents,	22
Number of children orphaned by fatal accidents,	62
Number of non-fatal accidents inside of mines,	88
Number of persons employed per non-fatal accident inside,	93
Number of non-fatal accidents outside,	16
Number of persons employed per non-fatal accident out-	10
side,	. 210
Number of steam locomotives used inside,	. 210
Number of compressed air locomotives used inside,	_
Number of electric metang read in ride	5
Number of electric motors used inside,	2
Number of fans used for ventilation,	46
Number of gaseous mines in operation,	26
Number of non-gaseous mines in operation,	13

# TABLE A.—Fifth Anthracite District, 1903

## PRODUCTION OF COAL

Names of Companies	Tons
Pennsylvania Coal Company,	1,845,701
Lehigh Valley Coal Company,	1,226,951
Delaware and Hudson Company,	520,090
Hudson Coal Company,	$252,\!578$
Hillside Coal and Iron Company,	648,665
Traders' Coal Company,	108,713
Avoca Coal Company, Limited,	.94,289
William Richmond Estate,	$35,\!456$
Clarence Coal Company,	28,690
Total,	
( ) = ( ) ( ) ( ) ( ) ( ) ( ) ( ) ( ) (	
Production by Counties	
Luzerne,	4,761,133

TABLE B.—Fifth Anthracite District, 1903

Fatal and non-fatal accidents; number of tons of coal produced per accident; number of persons employed; number employed per accident

əbiz	Number of employes out per non-fatal accident	220 153 563 103 440 210
obia	Number of employes out	880 1184 208 308 440 123 336
-spis	Number of employes in per non-fatal accident	10+ (6) 176 41 172 262 320 118
əbis	Number of employes in	170 230 176 1,631 1,831 1,831 231
S	Total number of employe	1,529
əbis	Number of employes out	8.00 8.00 8.00 8.00 8.00 8.00 8.00 8.00
əbi	Number of employes ins	3,228 1,613 8×0 652 1,031 262 320 320 118 65 65 8,169
Der e	Tons of coal produced fatal accident insid	59, 539 41, 739 161, 018 15, 786 108, 111 94, 289 28, 690
Ler	Tona of coal produced	97.142 1175.279 104,018 252.578 648,667 54,356 14,345
idents	IstoT	355 335 19 17 11 11 104
Non-Fatal Accidents	əbistuO	100 100 100 100 100 100 100 100 100 100
Non-F	əbisnI	88 88 88
dents		0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
Fatal Accidents	əbistuO	- m- m = 101
Fat	əpisuI	64 10 10 10 10 10 10 10 10 10 10 10 10 10
	Names of Companies	Pennsylvania Coal Co., Lehish Valley Coal Co., Delavare and Hudson Co., Hutson C. al Co., Ellistic Coal and Iron Co., Trader's Coal Co., Arwea Coal Co., Limited, Clavence Coal Co., Limited, William Richmond Estate, Totals and averages for district,

TABLE C.—Fifth Anthracite District, 1903 Classification of Fatal Accidents

	-	Grand total	00 @ 4 to 10 00 % for the 10 4   for
		Total outside	
S		Miscellaneous causes	-
f Min		subjective relief 34	-
Outside of Mines		By suffocation	
Out		Ву таейіпету	
		By cars	
		əbisni latoT	617240 46160-H 440 E
		Miscellancous causes	
		Suffocated by coal, etc.	
		By mules	
		Crushed at batteries	
	g Into	Manways, breasts, etc.	
nes	By Falling Into	Slopes	
Inside of Mines	By 1	shafts	
Inside		By blasts, etc.	
		Powder and dynamite	
		Smothered by gas	
		By explosion of gas	
		By mine cars	
	lls of	100H	
	By Falls of	91818	
		Coal	
			January, February March April, May, June, July, September, September, November, December, Totals,

TABLE D.—Fifth Anthracite District, 1903 Classification of Non-Fatal Accidents

		Grand total	#0000000000000000000000000000000000000	104
-		Potal outside	4 63 62 61 63	16
ž.		Miscellaneous causes	c) HH C101	oc
Outside of Mines		By holler explosions		
		noiteochus va		
		Ву тасыпету	21	¢o
		By cars	21 01	ro
		Potal IstoT	Tanken verended Tanken	SS
		Miscellaneous causes	7-1-	೯೦
		Suffocated by coal, etc.		
		By mules	ез :::: н	es.
		Crushed at batteries		
	By Falling Into	Manways, breasts, etc.		
es.		sədols		
Inside of Mines		shafts		
side c		By blasts, etc.	ਜ   ਰਾਜ ਜਜ ਲ	13
In		Powder and dynamite	1 5	eo 
		Smothered by gas		:
		By explosion of gas	0 mm 11 mm 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	83
		By mine cars	70 63 03 04	12
	jo s	100A	010001410111111111111111111111111111111	. 16
	Falls of	Slate		<u>.</u>
-	By	Coal	HT 20	9
			January, February Amrth, Amrth, May June, July September, October, Dovember, December,	Totals,

Occupations of Persons Killed or Fatally Injured Inside and Outside the Mines TABLE E.—Fifth Anthracite District, 1903

	lat a latert)	over.over da L
	obistno IntoT	
	sezolquie reili H.	
·•	shroto bin storoot-hooti	
	Shite pickers (men)	
Outside	sjage bjegste (poks)	
	nemern ban steenignd	
	Macksmiths and carpenters	
	nemerol shistuO	
	superintendents	
	9bisni lateT	्राक्ष्ण चार्यक्षास्त्रस्य चल्ल ।-
	All other employes	
	(,outbank men	
Je	Door-boys and helpers	e le le le l'alles
Inside	sasuum pun sasaatt	<u>π</u> −   Ω ·   −   ε.
	Miners' laborers	ee 212100 to 21 c
	Fire hosses and assistants Miners	
	Assistant mine foremen	
	удие толешен	
		January. February. Murch. Must. Must. June

TABLE F.—Fifth Anthracite District, 1903. Occupations of Persons Injured Inside and Outside the Mines

	Grand tetal	40000000000000000000000000000000000000	104
	Total outside		16
		0 HH 0HH	~
į	All other employes		:
Outside	Book-keepers and clerks		
	Slate pickers (men)		01
	Slate pickers (boys)		
	Engineers and firemen		e0
	Blacksmiths and carpenters		6.0
	Outside foremen		
	shashashiraquB		
	əbizni İstoT	4001110000001000	88
	All other employes		
	Company men		9
	Pumpmen		:
	Door-boys and helpers		00
Inside	Drivers and runners	4 60 H 60 H H 61	16
ī	Miners' laborers	\$00000H H4H01H01	33
	Niners	03 4 63 70 10 70 H 63 31	33
	Fire bosses and assistants		:
	nemerol enim Instalaza		:
	Mine toremen		:
		January, March, March, April, May, Juny, Juny, September, October, Occober,	Totals,

#### TABLE G.—Fifth Anthracite District, 1903

Nationality of Persons Killed or Fatally Injured Inside and Outside the Mines

	American	English	Welsh	Irish	Corman	Polish	Hungarian	Itahan	Slavonian	Lithuanian	Austrian	Russian	Swedish	Totals
March, April, May, June, July August,	1 1	1 1	1	1 1 1			1  1 	1  3	1 1	1	1		1	36 4 11 3 3 8 7 1 15 4
Totals,	9	2	1	7	- 0	4	3		6	1	2	1	1	47

TABLE H.—Fifth Anthracite District

Nationality of Persons Injured Inside and Outside the Mines

	American	English	Welsh	Scotch	Irish	Polish	Hungarian	Italian	Flav nian	Lithuanian	Austrian	Russian	Swedish	Totals
January, February, March, April, May, June, July, August, September, October, November, December,	2 4  2 3 1  3	2	2	1	2 1  1 2 4  3	3 4 1 2 5 1 1	1	2 1 2 1 1 3 2	1 1 1 1	1 1 1 		5 1 5 1 2 2	1	14 10 10 12 10 9 8 10 8 2 6 5
Totals,	21	3	2	1	13	18	1	14	7	6	1	16	1	104

TABLE I.—Fifth Anthracite District, 1903

Operators and mines, kind of openings, type and size of fans, size of furnaces, volume of air produced by fan or furnace per minute, number of splits of air currents, number of persons employed inside, and quantity of air produced for each employe per minute

0.88 0.88 0.89 0.89 0.89 0.89 0.89 0.89	303 337 337 337 337 337 337 337 337 337
######################################	207 1180 1180 1147 213 1117 108
28.74 28.95 77.95 91.85 91.85 91.85 115.94 115.94 116.93 106.83 106.	37,474 129,000 94,290 91,586 96,480 153,362 81,700
64, 270 64, 646 65, 647 65, 647 65, 647 75, 652 75, br>752 752 752 752 752 752 752 752 7	34, 435 69, 803 77, 642 86, 620 114, 376 65, 500 30, 302
84, 30, 27, 140, 28, 140, 28, 140, 28, 140, 28, 29, 29, 29, 29, 29, 29, 29, 29, 20, 20, 20, 20, 20, 20, 20, 20, 20, 20	36,000 119,100 84,830 77,830 52,215 148,746 74,200 48,671
40000000000000000000000000000000000000	ದಾಣ್ಯದ್ದಾರಿಯ ದ
Steam Steam	Steam, Steam, Steam, Steam, Steam, Steam, Steam,
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#4828844	0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.0
19 19 19 19 19 19 19 19 19 19 19 4 19 60 19	
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Shaft Shaft Shaft Shaft Shaft Shaft Shaft	Shaft Shape, Slope, Shaft Shaft Shaft Shaft
Pennsylvania Coal Co. 5, 5, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1,	Lehigh Valley Coal Co. Oakwood, Midvale, Hallman, Wyoming, Henry, Henry
	Shaft Gascous   Fan   29   6.6   5.3   45   5.8   Guhal   Steam   4   84,322   6.270   5.710   204   5.8

\*Idle all the year.

391	294 644 524 352	3.19 535 357	( 21 × 1 - 00 (		306
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85,200 45,200	108,755 10.5,070 180,400 115,365	115,490 110,415 57,950	97, 174 67, 475 47, 250 44, 280 177, 655	142,155	31,988
30, 225	56, 214 90, 2, 0 95, 970 81, 149	1(2,200) 78,225 50,075	55,320 47,669 31,639 50,830 141,949	43,570	21,1%
18.07	92,730 16,900 169,6.5 110,315	211,700 145,685 53,100	82,573 52,525 37,500 37,200 179,4.0	St. 715	24 9.13
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Stram,	Steam,	Steam,	XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX	Steam,	Steam,
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13	13.6 17.6	17.6 17 20 16	#27779	16	g 1
Fan,	Fan, Fan, 2 Fans, [	Fan,	Fan, Fan, Fan, Fan, Z Fans, [	Fan	Fan,
Gaseous, Non-gas.	Non-gas. Gaseous, Gaseous, Gaseous,	Gaseous, Gaseous, Non-gas.	Non-gas. Non-gas. Non-gas. Non-gas.	Non-gas.	Non-gas.
Slope	Tunnel. Shaft Slope,	Shaft, Slope, Shaft,	Slope, Shaft, Shaft,	Slope,	Tunnel.
Mineral Spring, Coal Brook	Raltimere, Section 1997, 1991, Indianate No. 2, Baltimere, Delaware,	Pine Ridge Laurel Run, Laffin,	Hillside Coal and Iron Co. Consolicated Consolicated Buller Rapman, Fernwood,	Traders' Coal Co. Ridgewood Avoca Coal Co., Limited. Avoca.	William Richmond Estate, Yatesville, Charence Coal Co. Clarence,

TABLE 1.—Fifth Anthracite District, 1903 Operators, Location of Collieries, Railroads, Etc.

Railroad to Mine	Erie and Wyoming Valley Lehigh Valley Lehigh Valley Lehigh Valley Lehigh Valley Lehigh Valley Lehigh Valley Lehigh Valley	
P. O. Address	West Pittston, West Pittston, Pittston, Pittston, Pittston, Pittston, Pittston, Pittston, Pittston, West Pittston, West Pittston, West Pittston, West Pittston, West Pittston, West Pittston, West Pittston, Pittston, West Pittston, Wilkes-Barre, Wilkes-Barre, Wilkes-Barre, Wilkes-Barre, Wilkes-Barre, Wilkes-Barre, Wilkes-Barre, Wilkes-Barre, Wilkes-Barre, Wilkes-Barre, Wilkes-Barre, Wilkes-Barre, Wilkes-Barre, Wilkes-Barre, Wilkes-Barre, Wilkes-Barre, Wilkes-Barre, Wilkes-Barre,	VI Alfance Accessed
Name of Superin- tendent	Henry F. McMillan. Henry F. McMillan. Freemont Stokes, Freemont Stokes, Freemont Stokes, Freemont Stokes, Freemont Stokes, Freemont Stokes, Henry F. McMillan, Henry F. McMillan, Henry F. McMillan, Henry F. McMillan, Freemont Stokes, Freemont St	L. 60101.33
P. O. Address	Scranton, Scranton, Scranton, Scranton, Scranton, Scranton, Scranton, Scranton, Scranton, Scranton, Scranton, Scranton, Scranton, Scranton, Scranton, Scranton, Scranton, Scranton, Wilkes-Barre,	V ALLES AND AND AND AND AND AND AND AND AND AND
Name of General Superintendent	W. A. May, Man- ager, W. H. Inglis. W. A. May, Man- ager, W. H. Inglis. W. A. May, Man- ager, W. H. Inglis. W. A. May, Man- ager, W. H. Inglis. W. A. May, Man- ager, W. H. Inglis. W. A. May, Man- ager, W. H. Inglis. W. A. May, Man- ager, W. H. Inglis. W. A. May, Man- ager, W. H. Inglis. W. A. May, Man- ager, W. H. Inglis. W. A. May, Man- ager, W. H. Inglis. W. A. May, Man- ager, W. H. Inglis. W. A. May, Man- ager, W. H. Inglis. W. A. May, Man- ager, W. H. Inglis. W. A. May, Man- ager, W. H. Inglis. W. A. May, Man- ager, W. H. Inglis. S. D. Warriner, S.	
County	Luzerne, Luz	
Names of Operators and Collieries	Pennsylvania Coal Co,  No. 1 shaft,  No. 8 shaft,  No. 4 shaft,  No. 5 shaft,  No. 5 shaft,  No. 10 shaft,  No. 11 shaft,  No. 10 Jr., shaft,  No. 10 Jr., shaft,  No. 14 shaft,  No. 19 shaft,  No. 10 Washery,  No. 8 washery,  No. 8 washery,  No. 8 washery,  No. 8 washery,  No. 8 washery,  No. 8 washery,  No. 8 washery,  Hillman slope,  Wadaa slope,  Hillman slope,  Hillman slope,  Henry washery,  Henry washery,	Tridings and a man,

Lehigh Valley Lehigh Valley Lehigh Valley	Delaware and Hudson Delaware and Hudson Delaware and Hudson Delaware and Hudson	Delaware and Hudson Delaware and Hudson Delaware and Hudson	Erie and Wyoming Valley Erie and Wyoming Valley Erie and Wyoming Valley Erie and Wyoming Valley Erie and Wyoming Valley Erie and Wyoming Valley	N. Y. & W. and C. R. R. Of N. J.	L. V. and E. and W. V.	New York and Erie	Eric and Wyoming Valley
Wilkes-Barre, Wilkes-Barre,	Scranton, Scranton, Scranton, Scranton, Scranton,	Scranton, Scranton, Scranton, Scranton,	Scranton, Scranton, Scranton, Scranton, Scranton, Scranton,				Scranton,
F. E. Zerbey, F. E. Zerbey, F. E. Zerbey,	E. R. Pettebone, E. R. Pettebone, E. R. Pettebone, E. R. Pettebone,	E. R. Pettebone, E. R. Pettebone, E. R. Pettebone,	V. L. Petersen, V. L. Petersen, V. L. Petersen, V. L. Petersen, V. L. Petersen, V. L. Petersen, V. L. Petersen,				N. A. James,
Wilkes-Barre, Wilkes-Barre,	Scranton, Scrant	Scranton, Scranton, Scranton,	Scranton, Scranton, Scranton, Scranton, Scranton, Scranton,	Avoca,			Scranton,
S. D. Warriner, S. D. Warriner, S. D. Warriner,	C. C. Rose, C. C. Rose, C. C. Rose, C. C. Rose,	C. C. Rose, C. C. Rose, C. C. Rose,	M. A. May. M. A. May. M. A. May. M. A. May. M. A. May. M. A. May. M. A. May.	Solomon Deeble, Avoca,	W. H. Hollister, Avoca,	Alex. Allan, Avoca,	C. B. Sturges,
Luzerne,	Luzerne, Luzerne, Luzerne,	Luzerne, Luzerne,	Luzerne, Luzerne, Luzerne, Luzerne, Luzerne, Luzerne, Luzerne,	Luzerne,	Luzerne,	Luzerne,	Luzerne,
Heidelberg No. 1 slope, Mineral Siring slope, Coal Brook slope,	Delaware and Hudsop Co. Baltimore tunnel, Baltimore St. po. 2 shaft, Baltimore St. po. Delaware shaft,	Hudson Coal Co. Pine Nidae shuft, Laurel Run slepe, Laffin shaft,	Hillside Caal and Iron Co. Consoldated slope. Consoldated shaft. Butler tumel. Chapman shaft. Ferrwood shaft and tumel. Pittston washery.	Traders' (oal (o. Ridgewood slope,	Avoca Coal Co., Limited.	William Richmond Estate Yatesville tunnel,	Clarence Soal Co.

TABLE 2.—Fifth Anthracite District, 1903

Number of tens of coal mined in each colliery, number of days worked, number of persons employed, number killed and injured, number of kegs of powder used, etc.

Number of horses and mules	80 80 114 81 110	432	60 H	4	436	111	105 40 60
9thmany5 lo shuned lo redmnX besu	934 4,449 19,531 2,666 8,139	36,069			36,069	41,331	37,009 3,084 12,672
Number of kegs of powder used	6, 3%5 13, 8%9 14, 485 8, 777 15, 106	58,562			28,562	11,057	6,267 3,808 4,506
Number of non-fatal accidents	0192290	35			35	53	7
Number of falal accidents	50 A 10 La 1-	2.1	: :	:	20	ಣ	4.67
Zumber of employes	823 871 871 1,275	4,059	49	49	4,108	920	558 214 314
Number of days worked	\$12 158 151 151	205	122	83		525	130 166 213
Total production of coal in tons	226,467 356,576 326,489 295,436 542,375	1,757,333	14,301	88,368	1,845,701	436,129	387.654 129,210 158,547
Number of tons sold to local trade and to local	60 334 6, 642 6, 406 1, 105	13,947			13,947		3,314 2,354 39
Mumber of tons used for steam solitelibes at seed bins	4,774 10,987 8,190 16,716 6,300	46,767	1,123	1,123	47,890	29, 795	8,340 15,500 6,897
Number of tons of coal shipped by rail or otherwise	231, 833 345, 255 312, 257 272, 304 574, 970	1,696,619	14,301	87,245	1,783,864	406, 334	376,000 111.376 151,611
County	Luzerne, Luzerne, Luzerne, Luzerne, Luzerne,		Luzerne,			Luzerne, Luzerne, Luzerne, Luzerne,	Luzerne, Luzerne, Luzerne, Luzerne,
Names of Operators and Collieries	Pennsylvania Coal Co.  No. 1 and 8 shafts,  Nos. 4, 7 and Hoyte shafts,  Nos. 5, 6 and 11 shafts,  Nos. 9, 10 and 10 Jr. shafts,  No, 14 shaft and tunnels,		No. 6 washery, No. 8 washery,		Totals,	Lehigh Valley Coal Co. Prospect shaft, Oakwood shaft, Hilman stope,	Wyoming shaft, Henry washery and shaft, Heidelberg shaft, Heidelgerg slope,

\*Totals in this column are averages.

38	354	78	44	164	89	40	151	89 3	92	174		174	36	09	14	18	1,407
11,911	106,010	2,303	1,081	6,819	6,413	1,478	13,73	3, 644	5 61 5 61 5 61	35,509		35,509	4,700	2,400	3,055	(E)	98 III
3,616	F. 6.4	7,888	3, 653	16,890	5,561	3, NG9 3, EG5	13, (35	E 8	6,715	22, 221		100 00	6,794	5,711	2,005	1,950	156, 852
64	1 55	1 24	oa e	9	1.	( - vji	13	Ho	1 424	t-		! t -	-	pool	1	-	104
60	12:	10	- :	9	61		67	==	1	0.1		†	61	-		G 2	4
4.6	2,532	689	305	1,383	45.4	55 55 1 - 44	0.00	1505	469	1,471		1, 171	60	22	98	136	11,726
147	178	216	175	194	16,	103	127	957	ISS	12.0	27		SEC	181	955	17.0	*
115,411	1,126,951	285,526	111,209	520, 0.0	135, 673	61, 167	272, 578	211,845	124, 214	541,263	137, 402	618,665	108,713	94,289	35,456	28,6.0	.4,761,133
	5,767		2, 542	5,681	1.394	4, 436 1, 508	1,1238	1,929	1,005	4,344		4,844	5,356	5,661	£3	170	48,177
14,300	74,832	44,926	16,917	88,679	27,388	5,143	47,131	7,574	7,200	28, 457	5,554	53,611	7,300	5,475	1,028	0.5	305, 946
101,111	1, 146, 412	241,000	90,750	425,730	196,991	59,630	148,249	282, 342	116,036	478,862	131, 818	610,710	96, 057	83,153	01,955	98,500	4, pog, 9ge/
	1 11			:	:		:	:-	- :	1	:	:	:	:	:	:	
Luzerne,		Luzerne,	Luzerne, Luzerne,		Luzerne,	Luzerne,		Luzerne,	Luzerne, Luzerne,		Luzerne,		Luzerne,	Luzerne,	Luzerne,	Luzerne,	
Mineral Spring slope, Coal Brook slope,	Totals,	Baltimore tunner, Baltimore No. 9 short	Baltimore slove, Delaware shaft,	Totals,	Pine Kidge shaft.	Lauret Kun stope, Laftin shaft,	Totals,	Hillside Coal and Iron Co. Consolidated superated shoft. Butler turnel.	Chapman shaft, Fernwood tunnel and shaft,		Pittston washery,	Totals, Tradors Con Co	Ridgewood slope,	Avoca shaft,	William Richmond Estate Yatesville tunnel.	Chrene stps: addrift,	Grand totals,

TABLE 2- Recapitulation

Number of horses and mules	436 354 161 171 174 36 60 14 18	1,407
Number of pounds of dynamite	36,069 106,010 6,819 23,783 35,500 4,500 3,400 2,055	221,945
Number of kegs of powder used	58,562 28,654 16,860 13,035 22,221 6,794 6,794 1,950	156,852
Number of non-fatal accidents	2000 90 27 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7	104
Number of fatal accidents	0.2000000000000000000000000000000000000	47
Number of employes	2,532 1,383 1,383 1,471 1,471 853 1,471 853 1,471 1,471 1,471	11,526
Number of days worked (Not including washeries)	205 1178 1284 201 1205 1206 1206	189
anot ni leos lo noitsuborq letoT	1, 845, 701 1, 226, 571 520, 090 252, 090 252, 678 648, 665 108, 713 94, 289 25, 690	4, 761, 133
Number of tons sold to local trade and used by employes	13,947 5,6707 7,238 7,238 4,344 6,346 5,661 170	48, 177
Number of tons used for steam and heat at collieries	47, 830 74, 832 88, 673 47, 131 7, 330 7, 330 1, 028	305, 966
Number of tons of coal shipped by rail or otherwise	1,783,864 1,146,412 425,730 198,209 610,710 96,077 83,153 84,355 28,500	4, 406, 990
County	Luzerne, Luzerne, Luzerne, Luzerne, Luzerne, Luzerne, Luzerne, Luzerne, Luzerne, Luzerne,	
Names of Operators and Collieries	Pennsylvania Ccal Co., Delaigh Valley (cal Co., Delaware and Hudson Co., Hulson Co., Hillside Coal Co., Avoca Coal Co., Avoca Coal Co., Limited William Richmond Estate, Clarence Coal Co.,	Totals,

TABLE 2-Continued

	Number of air compressors		t-			L-	H 44 170
	Number of electric dynamos						H 03 90
esel:	Quantity delivered to sur	298 1,634 4,752 1,416	8,140			8,140	2; 000 1; 000 1; 000 1; 000 1; 000
əjn	Capacity in gallons per min	3%5 3,741 7,763 2,789	14,478			14,478	2,800 1,500 1,350 11,450
Suir	Number of pumps delive water to surface	HID NOTE	15			15	10 03 19 4.01 Q
	Town Perfect power	812 1, 486 1, 577 1, 264 1, 043	7,082	233 473	716	7,798	2,500 2,200 340 1,200 7,200
Ils 1	Number of steam engines o	91 82 82 82 82 82 82 82 82 82 82 82 82 82	117	. 9	12	139	26 20 18 18 18 18 18 18 18 18 18 18 18 18 18
ves	Fleetric		1	: :	:		
Locomotives	Ti A.	- 61 62	10			22	
Loc	Steam	eo ⊢ e1	9			9	, 6 3
	Tetal horse power	1,650 1,650 1,650 1,650	8,500			8,500	2,000 1,750 900 450 1,180 6,280
w	Howse power	1,650 2,100 1,800 1,800 1,650	7,780			7,780	2,000 1,750 900 1,150 6,250
f Boiler	Tubular	4 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	575			523	8 -800
Number of Bollers	Horse power	240 480	35			720	30
ž	Cylindrical	12.66	18			18	
						:	
	County	Luzerne, Luzerne, Luzerne, Luzerne, Luzerne,		Luzerne, Luzerne,			Luzerne, Luzerne, Luzerne, Luzerne, Luzerne, Luzerne, Luzerne, Luzerne, Luzerne,
	Names of Operators and Collieries	Pennsylvania Coal Co.  Nos. 1 and 8 shalts.  Nos. 4, 7 and Hoyte shafts.  Nos. 5, 6 and 11 shafts.  Nos. 1, 10 and 10 Jr. shafts.  Nos. 4, 10 and to Jr. shafts.		No. 6 washery, No. 8 washery,		Totals,	Prospect shaft, Coal Co.  Dakwood shaft, Midwale shaft, Midwale shape.  Midman shope.  Wyoming shaft, Gelleberg shaft, Henry washery and shaft.  Henry washery and shaft.  Heldeberg shope.  Mineral Spring slope.  Toal Brook slope.

TABLE 2-Continued

			Number of Boilers	of Boile	ors		Loc	Locomotives			.Su	9	901		
Names of Operators and Collieries	County	Cylindrical	Horse power	Tubular	Horse power	Total horse power	Mastz	TiA oirteefTic	Number of steam engines of	Total horse power	Number of pumps deliveri water to surface	Capacity in gallons per minute	Quantity delivered to surta per minute—gallons,	somenyb virtoele to redminN	zrosserqmos ris lo redmuN
Battimore tunnel. Baltimore tunnel. Baltimore No. 2 shaft, Baltimore slope. Delaware shaft, Totals,	Luzerne,) Luzerne,) Luzerne, Luzerne,	128	\$10 540 360	01	2,000	2,810	60		2 51 16 222	4,068 1,293 1,004	23	2,100	1,150 1,800	H ::	61
Fine Ridge shart, Laurel Run shone	Luzerne,	10	T, (10)	in o	2, 750	4,460	::		68		44	5,850	3,350	-	2
Laffin shaft, Totals,	Luzerne,			0 61 10		1, 500 750			11.9 23	1.250 600 810	60 61	4,200	2,300		0 m m
Hillside Coal and Iron Co.				15	3,050	3,050			49	2,660	16	5,700	3,300		4
consoudation slope and shaft, Buttler tunner Chapman shaft, Fernwood tunnel and shaft,	Luzerne, Luzerne, Luzerne, Luzerne,	13	330	14	1,650	1,440	6110			440	61	408	306		7
i		18	720		2,010	2,730			on   c		-24	470	390		-
Pittston washery,	Luzerne,		:							1.300	9	878	969		2
Totals, Traders' Con Co.		18	720"	23	2,010	2,730	1-		2 65	1,450	9	878	969		. 6
Ridgewood slape,	Luzerne,	8	160	1	95	255			2	313	2	009	400		
														-	-

- || :|| :|| <sub>64</sub>

2 1,600 1,200		3.00 700	41,356 25,186 4
6 19N 2 876 4488 9 299 2 1.600	2 275 275	0.0	626 5.6
 m   		0.00	2 T2T 26.
	27.6	0.00	r3 -
1995	27.5	0.00	26, 348
300	575		112 22,510
198		- 14	3, 838
9		C2    	1111
Luzerne,	Luzerne,	Luzerne,	
Avoca shaft,	William Richmond Estate Luzerne,	Clarence slope and drift, 3 30	Grand totals,

TABLE 2- Recapitulation

						-										
nnsylvania ('oal ('o	Luzerne,	1	2	23	17.1.2	1.50	9	12		129	7, 798	17	11, 47		:	1
shigh Valley Coal Co.,	Luz rne,	-	E	===	6,250	6,244	=======================================			Ξ.	7,200	¢ 19	11, 150		00	ro.
daware and Hudson Co.,	Luzerne,	100	1,710	15	5,130	4, 460	: :	-	S1	÷	6,365	-J-	G. 7.5			¢1
adson Coal Co.,	Luzerne,	:	- 1	15	0.4.5	3,4.70			:	46	2,660	10	0 10			4
illside Coal and Iron Co.,	Luz-rne, 18	_	13011	601	2,619	0.4.5	[~		:	Ç	1, 47.0	9	1-1	(3.0)	:	c)
aders' Coal Co.	Luzerne,	1.		-	25	. 025	:		:	-	313	71	11 11			
	Luz-rne,	-	198	53	300				-:	s.	2500	1 0	1,600			_
illiam Richmond Estate,	Luzerne,			5.1	101			-:	:	1	50					:
arence Coal Co.,	Luzerne,	c o	300		:	9.50 9.50	:	:	:	~Jr	Q . F	0.0	6.3	(1)(1)	:	
Totals,		1111	100 N	145	142 22,510 26,348	26,348	1 %	10	- 2	1 1-	18, 89, 89, 89, 89, 89, 89, 89, 89, 89, 8	3	11,856	27,116		51
					_	_		-	-							

TABLE 3.—Fifth Anthracite District, 1903 Number of Each Class of Employes at Each Colliery

		Grand total inside and outside	823 871 871 1,256	4,059	4,108	920 558 274 314
	ide	Spistuo IntoT	112 192 190 170 167	831	880	285 168 111 130
	Occupations of Persons Employed Outside	All other employes	88 100 70 104	409	446	206 1125 111 60
	ployed	Book-keepers and clerks	енн н	16	7	4 0100
	s Em	Slate pickers (men)	26 26 15 15 15	134	134	
	Person	Slate pickers (boys)	37 40 33 16 11 12	138	138	27 44 48 88
	s of 1	Engineers and firemen	23 18 16 16	92	97	17 15 10
	tion	Blacksmiths and carpenters	133	5.42	63	1 60 60 80
	cups	nemerol ebistuO		ಬ್	9	H HHH
	õ	Superintendents		* :		H -::
		Total inside	332 631 681 496 1,088		2, 228	635 390 163 184
	ide	All other employes	2088E		268	154 154 36
	suI pe	Соппрапу теп	10 24 42 42 56		191	
	nploye	Lean Puntanen	21122		10	ro 624-01
1	ns Er	Door-boys and helpers	25 1 1 1 8 1 1 2 8 1 1 2 1 2 1 2 1 2 1 2 1		89	ले हिलास
	Perso	Drivers and runners	83 113 69 69 147		453	96 GBB
	Occupations of Persons Employed Inside	Miners' laborers	214 225 225 174 296		1,083	155 118 95 46
	patic	staniM	124 246 233 178 392		1,173	185 129 58 66
	Ocer	Fire bosses and assistants	0,11→1010 4a		19	P- 4-1-1
		Assistant mine foremen	- : : - :		2	es e3 ⊢ :
		Mine foremen	₩ co co co co		=	व नमस
		County	Luzerne, Luzerne, Luzerne, Luzerne, Luzerne,	Luzerne,		Luzerne, Luzerne, Luzerne, Luzerne, Luzerne, Luzerne, Luzerne, Luzerne, Luzerne,
		Names of Operators and Collieries	Pennsylvania Coal Co.  No. 1 and 8 shafts.  No. 4, 7 and Hoyte shafts.  No. 5, 6 and 11 shafts.  No. 9, 19 and 10 Jr., shafts.  No. 14 shaft and tunnel,	No. 6 washery.	Totals,	Lehigh Valley Coal Co. Prospect slaft, Oakwood shaft, Midvae slope, Hillman slope, Wyoning shaft, Heidelberg shaft, Heidelberg slope,

\*Employes included in No. 6 breaker.

466	2,532	296 3.53 3.05 3.85	1,383	489 1931 1931	97.6	473	409	1,471	35.3	44.3	, S	130	11,526
225	919	217 1115 1134	63	38K	308	132	124	410	91	123	51	21 £-	357
120	522	2244	190	45	132	5.8	46	246	40	40	Lo	- O <del>f</del>	670 3.
4	16	H 0101H	9		တ	6313	- :	oc l	60	00	- 1		47 1.
	36	12. 13. 13.	2.6	12 × 15	03	10		2	9	1.8		4	334
15	13.5	452	135	61	6.3	S 101	800	121	88	8	00	1 11	743
26	25	19 20 14 18	11	Mars.	14	1 22	15	#	00	9	era .	ic.	365
63	63	2000	19	4-10	a	1 6	00	1.9	4	9	6.3	4	166
-	10		co		60		H :	00	-	-	1	-	£1
F7	~					-		-	-	-	-	-	v.
241	1,613	259 176 190 ·	088	329 167 156	652	15.2	282	1.031	262	320	29	118	8,169
92	339	88236	125	14	62	:7	67.5	136	63	~	-		928
			\$2	§] <del>4</del>	56	36		36	ล	હ	-	10	35.2
	14	4~40]	11	4 00	2	21	ю	2	67	63		e)	55
00	62	5000	33	444	6	∞ ≎1	c1	13	11	Ħ	c1	G1	210
81	228	88348	103	6332	130	୧୫	66	13%	49	40	00	Ξ	1,140
8	443	89 89 80 80 80 80 80 80 80 80 80 80 80 80 80	697	26 44 44	177	156	\$:	325	59	115	26	1 13	2, 481
33	900	8848	262	Haa	37.7	25	Z.	38.2	116	120	26	29	5.877
<b>—</b>	#	60 10 42 11	21	→ co →	1	-	: :	-	-	=		:	39
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6.3	t-		7	~~~	-0	1 67 07	- :	io.	63	-	=	-	32
Luzerne,		Luzerne, Luzerne, Luzerne,		Luzerne, Luzerne, Luzerne,		Luzerne,)	Luzerne, Luzerne,		Luzerne,	Luzerne,	Luzerne,	Luzerne	
Mineral Spring stope,	Totals,	Pelaware and Hudson Co. Baltimore tunnel, Baltimore No. 2 shaft, Baltimore slope, Delaware shaft,	Totals,	Hudson Coal Co. Fine Ridge shaft. Laurei Run slope, Lailin shaft.	Totals,	Hillside Coal and Iron Co. Consolidated slope and shaft, Butler tunnel.	Fernwood tunnel and shait, Pittston washery,	Totals,	Traders' Coal Co.	Avoca shaft,	William Richmond Estate Yatesville tunnel,	Clarence Coal Co.	Grand totals,

†Employes included in Butler Breaker,

TABLE 3-Recapitulation

1		I	
	Grand total inside and outside	2,108 2,108 1,383 1,471 1,471 86 86 86 86 190	11,526
side	Potal outside	880 913 308 308 348 840 113 123 123 124 125	3, 377
d Out	All other employes	444 1332 1332 140 40 40 40 40 40 40	1,670
ploye	Book-keepers and clerks	L-83000000H	t-
Occupations of Persons Employed Outside	Slate pickers (men)	134 36 76 76 76 76 76 76 76 76 76 76 76 76 76	65
Perso	Slate pickers (boys)	85.5 8.5 8.5 8.5 8.5 8.5 8.5 8.5 8.5 8.5	143
lo su	Engineers and fremen	P&111130000	3 22
atio	Blacksmiths and carpenters	55 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5	166
dno	nemerol ebistuO	91000000000	- F1
000	Superintendents	20 ::	∞
	Total inside	3, 228 5, 1, 5, 228 1, 6, 5, 23 2, 6, 6, 6, 6, 6, 6, 6, 6, 6, 6, 6, 6, 6,	8, 169
ide	All other employes	268 333 125 136 136 136	938
suI pa	('ompany men	191 888 888 101	362
nploye	Бишртеп	0411	55
ns Er	Door-boys and helpers	8888 211100	210
Occupations of Persons Employed Inside	Drivers and runners	# 4 2 2 2 3 4 4 8 L	1,140
Jo suc	Miners' laborers	1,033 44,53 11,03	1,481
upatio	steniM	1, 173 882 116 116 116 120 120 120 120 120 120 120 120 120 120	SI SI
000	Fire bosses and assistants	2222:	35
	Assistant unine foreinen	01 \$00 FH   01 FH	12
	Mine foremen	I - 400001-1-1	12
	County	Luzerne, Luzerne Luzerne Luzerne Luzerne Luzerne Luzerne Luzerne Luzerne Luzerne Luzerne	
	Names of Operators and Collieries	Pennsylvania C'ad (Co., Lohigh Valley C'ad Co., Lohigh Valley C'ad Co., Hudson C'ad Co., Hudson C'ad and Iron Co., Traders C'ad and Iron Co., Traders C'ad Co., William Richmond Estate Clarence Coal Co.,	Totals,

TABLE 3-Continued

11		/ *** = I3		45	-0 to et t+	9	' 22 Ell	s <del>-1</del>	1 %
	simp.f.	42455	95	61	188	17.	35.		168
	1) семпры.	==2==	=	1.21	X + X   12	16.6	81 515 65 616		
	Tulm-YoV	2*275	77	5	> = = = = = = = = = = = = = = = = = = =	10.5	13.0	-   L-	
eaker	To(1, 10)()	25253	21	50	0101	0.	14. 15.	- 61	19.6
h in I3r	September	22223	17	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	18.6	16.1	14.8		2.6
h Mont	ysnany	85353	31	5 . L4	21 8 21 8 21 8 21 8 21 8	1.7	£ 7	15.4	
Number of Days Worked Each Month in Breaker	Alut	81518181		21.6	17.52	18.9	\$ E		
rs Worl	annt	255525	8	20.1	13.6 19.6 19.6	18.5	13 E	15. V	
of Day	yay	ត្ននិត្តិ	කි	15.3	1244 1244	17.2	21.6	16.4	19.6
Number	Timl	<u> </u>	19	51	14.7 18.1 17.5	1:5	8		69
	Дэтећ	11 18 18 18 18	16	S. E.	8192 8193 8193 8193	21.7	1 2 23		21.8
	Pehruary	22223	11	* 60 01	61 T. T.	19.5	81 23	16.9	61
	Lanuary	22222	18	÷1	81.81 87.81 87.81	21.8	8, 2,	19.3	9. 85
	County	Juzerne Luzerne Luzerne Luzerne, Luzerne		Luzerne,) Luzerne, Luzerne,	Luzerne,] Luzerne, Luzerne, Luzerne, Luzerne,]		Larzerne,) Larzerne,  Larzerne,	Luzerne,	Luzerne,
	Names of Operators and Collieries	No. 1 and 8 sharts. No. 4, 7 and Hoyte shafts, No. 5, 6 and 11 shafts. No. 9, 10 and 10 Jr. shafts. No. 9, 10 and tunnel, No. 14 shaft and tunnel,	Averages,	Prospect shaft, Oralwood shaft, Midwahe shaft, Midwahe shape, Hillman slope,	Wyouting start, Illiamy washeav and shall, Heidelberg shalt, Heidelberg shalt, Miteral String at 19 pr. Cott Brook, shape,	Averages,	Delaware and Hudson Co. Faltimore tunnel. Raltimore No. 2 shaft. Baltimore stope.	Delaware shaft,	Hudson Coal Co. Pine Ridge shatt,

TABLE 3-Continued

					Number	of Da	Number of Days Worked Each Month in Breaker	red Eac	h Mont	h in Br	eaker			
Names of Operators and Collieries	County													
		January	February	March	lingA	May	əunr	July	isugua	September	October	November	December	sistoT
Laurel Run Slope, Laffin shaft,	Luzerne,	12.2	9.1	8.8	8.5	6.8	9.1	7.8	9.2	10.1	8.1	9.1	9.8	109
Averages,		13.8	12.5	12.4	12.9	11.3	7.8	oo.	9.3	7.5	12.9	13	13.6	127
Hillside Coal and Iron Co. Consolidate slope and shaft,	Luzerne,	23.8	22.4	18.2	20.3	19.3	25.2	23.8	23.6	21	Ħ	15.7	15.8	240
Chapman shaft Fernwood tunnel and shaft,	Luzerne,	17.7	14.7	15.1	14.2	15.2	17.8	18.4	18.7	16.6	9.2	10.8	12.8	181
Averages,		19	16.9	16.8	14.3	17.2	19.9	20.2	19.9	18.1	9.2	11.8	15	201
Traders' Coal Co.	Luzerne,	23.4	17.6	20.4	20.4	21.3	21.6	21.3	21.3	20.3	14.5	22.4	23.8	248
Avoca Shaft,	Luzerne,	20.9	16.5	17.8	16.6	15.4	15.9	17.6	15.5	10.4	10.8	15.4	19.4	192
William Richmond Estate	Luzerne,	20.5	15.2	18.1	18.8	18.2	17.9	19.7	18.5	14.7	11.4	14.7	18.7	306
Clarence Coal Co.	Luzerne,					24	21	42	16	02	13	17	15	150
Averages,		18.9	16	17.1	16.6	17	17.8	18.1	17.7	15	11.4	12.2	15.3	189
The state of the s														

TABLE 3-Recapitulation

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	rotals	STAPERED S
	D) сешр л	11 13 13 13 13 13 13 13 13 13 13 13 13 1
	<b>Х</b> охешbег	111 100 1118 1118 1118 1118 1118 1118 1
eaker	rador-O	92 93 93 94 10 10 10 10 10 10 10 10 10 10 10 10 10
th in Br	September	स्थान १८० वस्ति । स्थान १८० वस्ति । स्थान १९० वस्ति ।
ch Mon	August	12.1 18.5 19.9 19.9 16.5 16.5 17.7
Number of Days Worked Each Month in Breaker	ylut	22 18.7 18.7 8.2 20.2 21.3 11.6 19.7 18.1
ays Wor	əunr	24 18.5 17.4 17.8 19.9 17.9 17.9 17.9
er of Da	yelv	00 17:12 44:11 18:21 18:22 18:31 17:12 18:31 17:12 18:31 17:12 18:31 18:
Numb	lirqA	10. 12. 12. 13. 13. 13. 13. 13. 13. 13. 13. 13. 13
	Матећ	16 10 10 10 10 10 10 10 10 10 10 10 10 10
	February	11 15.55 10.
	January	S11.1 S11.1
	County	Luzerne Luzerne Luzerne Luzerne Luzerne Luzerne Luzerne Luzerne
	Names of Operators and Collieries	Pennsylvania Coal Co., Lehigh Valley (val Co., Lehigh Valley (val Co., Hudson Coal Co., Hilbside Coal and Iron Co., Area Coal Co., Area Coal Co., Milliam Richmond Escare, Clarence Coal Co., Averages,

TABLE 4.—Fifth Anthracite District, 1963 Fatal Accidents in and about the Mines

	Nature and Cause of Accident in Brief	Killed by plank falling on him from top	of breaker.  Fatally injured by a piece of ice falling down shaft and striking him on the	Fatally injured by mine car.  Killed in face of breast by a piece of	rider coal striking him on the head.  Killed by a fall of rock at face of breast.  Fatally injured by trip of empty mine	—————————————————————————————————————	breast.  Killed by railroad car.  Fatally injured by a fall of rock at face	of breast Willed by a fall of coal at face of breast	while loading a car. Killed by being caught between car and	prop in breast. Killed by falling off front end of culm	car. Fatally injured by fall of rock in breast. Killed by collar falling on him. Killed by a runaway trip of loaded cars. Fatally hurned by gas. Killed in the roller.	Fatally injured by a premature blast. Killed by falling off front end of railroad car.
	County	Luzerne, .	Luzerne, .	Luzerne, . Luzerne, .	Luzerne, .	Luzerne,	Luzerne, .	Luzerne, .	Luzerne, .	Luzerne, .	Luzerne, . Luzerne, . Luzerne, . Luzerne, . Luzerne, .	Luzerne, . Luzerne, .
•	Name of Colliery	Mineral Spring,	No. 6 shaft,	No. 5 shaft,	Baltimore No. 2, Henry, outside,	No. 8 shaft, Henry shaft, No. 1 shaft,	Henry washery, Baltimore tunnel,	Baltimore tunnel,	Pine Ridge shaft,	Ewen breaker,	No. 14 shaft. Midvale slope, No. 14 tunnel, No. 14 shaft, Heidelberg No. 2	Prospect shaft, Consolidated breaker.
-	Number of orphans	9	:	::	. 4	9	7	:	:	:	: :5-4	. eo
1	swobiw to redmuN	-	:	: :	:-	1 6	нн	:	:	:	::	H
	Married or single	Ä	κį	vi vi	Z.S.	z z z	M.M.	υż	vi	ιά	KKKNS	K.S.
	486	22	53	152	28	23.88	31 40	30	18	15	0288 4088 75 75	51 88 75 88
	noitsquooO	Carpenter, .	Shaft foot- man.	Driver,	Laborer, Track layer,	Laborer, Laborer,	Co. man, Miner,	Laborer,	Driver,	Culm leader,	Laborer, Runner, Miner, Miner,	Miner, Railroad car loader,
	Nationality	German,	American,	Russian,	Slavonian,Irish,	Slavonian, Austrian, Irish,	Hungarian, . Irish,	Polish,	American,	American,	Hungarian, . Slavonian, . Irish, English,	Slavonian, Italian,
	Name of Person	William Neimeyer	Thomas Martin,	Anthony Telershaski, Samuel Lomendro,	Andrew Pojdin, Edward Sheriden,	Joseph Yesmont, Anthony Snegil, John Flannagan,	John Semock.	Vetal Kransiki,	James Conyngham,	Cartie Monahan,	Anthony Mortitus, Michael Ignatez, Timothy Ford, William Moaks, Nicholas Beonka,	Joseph Jack,
	Date of accident	Jan. 2	10	Feb. 7	113	19 23 26	March 2	21	6.1	April 23	May 1 6 6 8 8 8 29	June 11

61 4	24 George Langdon,	English,	Miner,	2.	M.		Miner, 70 M. 1     Baltimore No. 3, Luzerne,		Fatally injured by being run over by a
1- =	7 John Roth,	Swedish,	Miner,	88		M. 1	No. 9 shaft,	Luzerne, .	Killed while firing a blast Fatally injured; squeezed between car and mule
133	Charles Terelock,	Austrian, Irish,	Min r, 26 Fireman, 22 Min r, 49		N.S.M.	= =	M. 1 Chapman shaft, S. Avoca, M. 1 8 No. 1 shaft,	Luzerne, Luzerne,	K hed by a blast Killed by b fler exclosion, Ratally injured by fall of top coal in his
515151	Joseph Novitiskie, Ferdinand Then, John C. Mills,	Polish, American,	Runner, Co. laborer,	21 18 69	Z.v.Z	K.S. S.	No. 14 shaft,	Luzerne, Luzerne,	Killed by falling in front of cars. Estally injured by being struck by culm
·	George Selbick,	Humgarian, . Lithuanian, .	Miner,	₽ 61		N. 1	11/1	Luzerne, . Luzerne, .	Fatally burned by gas. Died August 14. Patally injured by 1all of rock at face of breast
L-	Hemy Peterman,	German, Miner,		ñ	M.	:	Cont Brook slope,	Luzerne, .	Killed by fall of r ck at face of his breast
***	George Peters,	American,	American, Driver, 17		υ <u>΄</u>	 	Paltimore No. 2 shaft, Luzerne,	Luzerne, .	Killed by being coreht against side of shaft with empty e.c.
	Martin Walsh,		Laborer, 24 Miner,		: v:∑y		N. 4 shaft,	Luzerne, .	Killed by fill of rock at face of breast.  (ill styr a dast, Killed by a dast, Killed by fall of rock at face of breast,
# 02 F 1	Michael Pechuck, Michael Pechuck,	Polish,	Miner,	1898	: : : = : : : : : : : : : : : : : : : :	# F			Killed by flying coal from a blast. Filled by a blast, Killed by a rook blast.
វីឡតិ	Joseph Russ, John Shedleck,	Italian,	Laborer,	51.5	7.2	1 5			Killed by a fall of rock at face of his
\$ 71	Anonia Ginsppe,	Italian	Co. laborer, 41 Runner, 20		Z7.	61	2 Prospect breaker, Heyte shaft,	Luzerne, .	gangway. Estyled by railroad car at breaker. Fatally injured by falling in front of mater.
C100 mg	Harry Korrilla, Robert Walker,			65 12 15	Z 7. 7.	7	1 No. 6 shaft. Luzerne. No. 11 shaft. Luzerne. Pine Ridge breaker Luzerne.	Luzerne, . Luzerne, . Luzerne, .	Farally injured by explesion of dynamite. Killed by an explosion of gas. Smethered in culm pocket.

TABLE 5.—Fifth Anthracite District, 1903 Non-Fatal Accidents in and about the Mines

Nature and Cause of Accident in Brief	Face and hands burned by gas, caused by door being left open.  Enger out off; caught between coal on car and roof.  Back and legs bruised by coal falling Head cut and burised; kicked by his mule. Am broken; struck by coal flying from a blast.  Finger out of while spragging a loaded car.  These five men were more or ess burned about the face and hands by an explication of gas at face of the grangway; a door was left open, which cut the nire and Kopsylo werlt into gangway and jair current off. The miners and the borers were out at their box at the time and Kopsylo werlt into gangway and ignited the gas. He died from his burns.  Body painfully squeezed between door frame and car.  These three men were burned on face and hands by an explosion of gas, caused hands by an explosion of gas, caused hands by an explosion of gas, which brought down from the roof a small quantity of gas.  While moving a steam shovel it fell over on them, injuring them.
County	Luzerne, . Luzerne, . Luzerne, . Luzerne, . Luzerne, . Luzerne, . Luzerne, . Luzerne, . Luzerne, . Luzerne, . Luzerne, . Luzerne, . Luzerne, . Luzerne, . Luzerne, . Luzerne, . Luzerne, .
Name of Colliery	Henry shaft,  No. 10 shaft,  Baltimore tunnel,  Avoca shaft,  Ridgewood slope,  Fernwood shaft,  Prospect shaft,  Prospect shaft,  Prospect shaft,  Prospect shaft,  Prospect shaft,  Prospect shaft,  Prospect shaft,  Prospect shaft,  Prospect shaft,  Prospect shaft,  Prospect shaft,  Prospect shaft,  Prospect shaft,  No. 9 shaft,  No. 9 shaft,  No. 9 shaft,  No. 9 shaft,  Prospect, outside,
Married or single	EK wwk w Kkwww K K ww w K w
93A	19 10 10 10 10 10 10 10 10 10 10
Occupation	Driver, Laborer, Driver, Laborer, Brattice man, Rock miner, Laborer, Laborer, Miner, Miner, Miner, Laborer, Miner, Miner, Laborer, Laborer, Miner, Miner, Laborer, Laborer, Laborer, Laborer, Laborer, Laborer, Laborer, Laborer, Laborer, Laborer, Laborer, Laborer, Laborer, Laborer, Laborer, Laborer,
Vationality	Itrish, Italian, Polish, American, Irish, American, Russian, Russian, Russian, Russian, Polish, Polish, Polish, Trish,
Name of Person	Bryan Burke, John Fackan, Toney Slaviski, John Miller, John Bontempe, John Brennan, James Flynn, George Marko, Michael Measer, Albert Jeck, Albert Jeck, Albert Jeck, Anthory Curcumskie, Anthory Wyoskey, Charles Fisher, George Olmstead, Rosiaro Mustruzzee, James Harley,
Date of accident	Jan. 3 10 10 10 20 20 20 20 20 20 20 20 20 20 20 20 20

Faces and hands of these two men were burned by powder, a spark from their lamp going into the keg.  Back bruised and shoulder cut by fall of coal.  Face, and hands burned while running babbett metal.  Skull fractured while working in breaker, by a bott falling from above on him.  Leg cut and bruised by car running over	Fare and hands burned by gas, Callar bone broken; fell off car he was riding on.  Wrist broken by a piece of rock falling on him.  Arm amputated; fell in front of car he Fare and hands painfully burned by gas, These three men were more or less founded by gas, caused by a door being	Left open two long after they had fired a blast in their breast.  Leg broken by fall of rock while stand- Hip dislocated and scalp wound by fall of rock.  Plis broken; struck by falling rock from the roof.  Thigh broken by fall of eval and rock.  Leg broken by fall of top scal be was	These four men were more or less in- jured by a blast in their herest. A blast was prepared for firing in the top bench and a squib put in same and left until the car was loaded; one of the near's light came in contact with the squib, igniting it and exploding the hast.  Body painfully bruised by rock falling on him.	1 by powder he wy y plane rope wh k striking him. k by piece of ro
Luzerne, Luzerne, Luzerne, Luzerne, Luzerne,	Luzerne, Luzerne, Luzerne, Luzerne, Luzerne, Luzerne,	Luzerne, Luzerne, Luzerne, Luzerne, Luzerne, Luzerne,	Luzerne, Luzerne, Luzerne, Luzerne, Luzerne,	Luzerne, Luzerne, Luzerne, Luzerne,
Prospect shaft,  Prospect shaft,  Prospect shaft,  Prospect, outside,  Mineral Spring, outside  No. 10 shaft,	Baltimore No. 2 shaft, Lafiln shaft, Midvale slope, Prospect shaft, Prospect shaft, Henry shaft, Henry shaft,	Henry shaft,  No. 7 shaft,  Laurel Run slope,  Pinc Ridge shaft,  Prospect shaft,  No. 5 shaft,	No. 5 shaft. No. 5 shaft. No. 5 shaft. No. 7 shaft. No. 7 shaft.	7 shaft,
w K K K w	Kon on on Kon Kin Kin Kin Kin Kin Kin Kin Kin Kin Ki		K K WKwy	
5. 5. 5. 5. 5. 5. 5. 5. 5. 5. 5. 5. 5. 5	26 21 13 31 144			
Miner, Laborer, Miner, Machinist, Carpenter, Door boy,	Miner, Driver, Laborer, Driver, Neiver, Laborer, Laborer, Laborer,	Laborer, Miner, Laborer, Miner, Miner, Miner,	Miner. Laborer. Laborer. Laborer.	Laborer, Driver, Plateman, Rockman, Track layer,
Lithuanian. Lithuanian. Austrian Swedish, American,	Polish, Russian, Polish, Slavonian, Welsh, Polish,	Welsh, Scotch, Russian, Slavonian, Slavonian, Irish,	Russian, Russian, Russian, Italian,	Italian, American, Irish, Irish, American,
Thomas Romonskey, Ambrose Simon, Andrew Kovalick, John Johnson, Richard Drum,	H 4 D D DOO.	David Lowis, Alex. Martin, George Perts, Paul Hoodae, Andrew Dutco, James Moffatt,	Samuel Sowada, Michael Poliska, Harry Dragon, Michael Canthuski, Pietrocola Giacomo,	
18 18 21 22 24 24	23 8 8 855		16 16 15	30 30 11
March		April		May

TABLE 5-Continued

Nature and Cause of Accident in Brief	Face and hands burned by gas; door left	open.	Arm and face cut by flying coal from a	Collar bone broken while jumping from a	Face and hands burned by gas after firing	V.  ₹	J.,	Head painfully cut and bruised by the	Hip and back bruised by rock falling on	Arms and face cut and burned by prema-		Hip dislocated; fell in front of car he	was running. Leg broken while riding in car; had his	Ribs broken; caught between car and his	Rack broken by fall of rock while helping	Face and hands burned by gas in a cross	cut not through. Cheek home broken; kicked by a mule he was passing.
County	Luzerne, .	Luzerne, .	Luzerne, .	Luzerne, .	Luzerne, .	Luzerne, .	Luzerne, .	Luzorne, .	Luzerne, .	Luzerne, .	Luzerne, .	Luzerne, .	Luzerne, .	Luzerne, .	Luzerne, .	Luzerne, .	Luzerne, .
Name of Colliery	Prospect shaft,	Prospect shaft,	Fernwood shaft,	Laffin, outs'd',	No. 5 shaft,	No. 14 shaft	Henry, New, shaft,	Henry, New, shaft,	Laurel Run slope,	Consolidated slope,	No. 6 shaft,	Prospect shaft,	Midvele slepe,	Pine Ridge shaft,	Fernwood shaft,	Baltimore No. 2 shaft,	S.   Laurel Run slope, Luzerne,
Algnis to beitraki	_ vi	M.	vi	M.	"/ <u>.</u>	iv iv	M	υ <u>ά</u>	M.	M.	M.	vi	wi	υi	M.	M.	
984	. 20	. 40	34	12	56	21.13	. 38	50	Ŧ.	12	. 29	25	18	191	. 30	4.5	16
noi bequeso	Laborer,	Miner,	Miner,	Carpenter,	Miner,	Miner, Fi.eman,	Rockman,	Rockman,	Brattice man,	Minor,	Miner,	Runner,	Driver,	Driver,	Miner,	Laborer,	Door boy, 16
VillenoilaN	Russian,	Slavonian, .	Italian,	American, .	Lithuanian,.	Mucrean,	Hungarian, .	Irish,	Irish,	Irish	Lithuanian,.	Irish,	Pel sh,	Polish,	Italian,	Slavonian, .	American,
Name of Person	Frank Weitscolames,	John Vedomskie,	Paul Lagancha,	James McFarland,	John Valukas,	Harry Krupka,	Joseph Kashki,	William Sullivan,	James McAffee,	John Kennedy,	August Kean,	Hugh Campbell,	Stanley Matusick,	Henry Smith,	Charles Chup,	John Larines,	11 Thomas Brogan,
finobio a 10 ota(I	111	21	===	18	6]	21 22	June 1	1	1	63	r3	ıo	బ	10	11	es	111

on; fell off his mule goin	Arm broken at noon hour; Jell Irom a tree he had climbed.		Thumb cut off; caught between car bump-	. Legs, broken by car jumping the track, (This mines and his labores were covered)	Durned by an accumulation of gas in a	Gavity at the face.  Back broken; fell off building while	Severely bruised by fall of rock; his miner were lethed by tall	Ribes broken by coal from a blast he was	. Face and hand burned by gas; went into	build cross cut.  Serverly builds and chest by fall of rock.  Ribs broken; thrown from mule's back	and dragged on ground, Ankle dislocated: 1ell while stepping out	of way of falling fock.  Leg cut off; fell under trip of cars beco-	Arms and neck burned by gas; was told	not to go into breast.  Head cut; fell in front of car at foot of	. Leg broken; riding on bumper of empty	Squezzel about abdomen by rock sliding	Ribs broken by flying coal from a blast	. Leg brooken by tumping on trip of cars	Collar bone broken; struck by chain hoist	. Arm broken; caught between car and	Skull fractured; struck by a piece of coal	Pating on him.  Pating of car	occurs a loop.  (These two miners were severely injured in a premature blast; while tamping the hele, it exploded on them.
Luzerne,	Luzerne,	Luzerne, Luzerne,	Luzerne,	Luzerne,	Luzerne, Luzerne,	Luzerne,	Luzerne,	Luzerne,	Luz-rne,	Luzerne, Luzerne,	Luzerne,	Luzerne,	Luzerne,	Luzerne,	Luzerne,	Luzerne,	Luzerne,	Luzerne,	Luzerne,	Luzerne,	Luzerne,	Luzerne,	Luzerne, Luzerne,
p proof	No. 14 tunnel	Laurel Run slope, Butler, outside,	Laurel Run slope,	Chapman shaft,	No. 6 shaft, No. 6 shaft,	Prespect, outside,	Coal Brook slepe,	Prospect shaft,	No. 5 shaft,	No. 14 shaft,	Fernwood shaft,	No. 11, outside,	No. 9 shaft,	No. 6 shaft,	Wyoming shaft,	No. 14 shaft,	No. 1 shaft,	Yatesvill breaker,	Pine Ridge, outside, .	No. 4 shaft,	Hillman slope,	Laffin shaft,	No. 7 shaft,
vi v	ń v	i sig	vi	vi	MM	M	υi	M.	và	Z v	υż	υż	υż	M.	vi	'n.	M.	υż	υż	ω.	M.	ŭ	v. vi
119	er	119	. 38	62	455	57	81	41	61	50 1.S	65	1-1	36	30	16	31	40	14	06	67	40	17	18 83
														tman,									
Driver,	State picker,	Runner, Laborer,	Timberman,	Laborer,	Miner	Carpenter,	Laborer,	Minet	Survey or,	Miner	L.bor. r.	Laborer.	Miner.	Shaft footman,	Driver, .	Laborer,	Miner,	Slate picker,	Fireman,	Laborer, .	Laborer, .	I)river,	Miner.
	Italian, Minor		English, Timberman,	Pelish, Laborer,	Polish, Miner,	American, Carpenter,	Russian, Laborer,	Russian, Minet,	American, Surveyor,	Polish, Miner	Polish, L.borer,	Italian, Laborer,	American, Miner, .	Irish, Shaft foo	Irish, Driver, .	Polish, Laborer,	Irish, Miner,	Italian, Slate pick	Slavonian, . Fireman,	Russian, Laborer, .	Russian, Laborer, .	Italian, Driver,	American, Miner,
George Atwell, English,	Jeseph Maste, Hallah,	Thomas Canavan, American, James Fretbermeh, Italian,		:		:		1g antz Paugris, Russian,	E. Roy Sw. zey, American,	- : :		:		Will am Dadley, Insh,	James Clune, Irish,	:	:	:		Joseph Morris, Russian,	Andrew Barrilla, Russian,	:	John Tennent, American,
George Atwell, English,	Tralian	Thomas Canavan, American, James Fretbermeh, Italian,	English,	Pelish,	Polish,		Itussian,	Russian,	y, American,	Polish,	Polish,	· Italian,	American,	y, Irish,	Irish,	, Pulish,	Irish,	Italian,	Slavonian, .	Russian,	la, Russian,	Italian,	American,

TABLE 5- Continued

11	1
Nature and Cause of Accident in Brief	Squeezed while riding up slope on car; caught between car and roof. Severely injured by premature blast in loop rook; the miner, Grazie, and other laborer, Russ, were killed by this blast. Toe cut off; caught between car bumpers. Ribs broken by a piece of top coal falling on him.  Face and hands severely burned by gas; Blightly bruised by the concussion of the above explosion. Ankle broken by rock falling from the rib and sliding from the good of the rib and sliding from the gob, on him.
County	Luzerne, . Luzerne, . Luzerne, . Luzerne, . Luzerne, . Luzerne, . Luzerne, .
Name of Colliery	M. Laffin shaft,
Married or single	M N N N N N N N
Age	32 33 33 16 45 18 17 17
noilaquooO	
Nationality	a, American,  I. Tulian,  Polish,  Polish,  Slavonian,  English,  Lithuanian,  American,
Name of Person	Charles Kresge Peter Castellin. Michael Russel Joseph Sudnic, Andrew Bromo James Parker, Joseph Miller, John Metzgar,
Date of accident	Dec. 30 25.23

#### Remarks on Accidents

There were 47 fatal and 104 non-fatal accidents in this district during the year.

By referring to Table C it can be seen that 37, or 78.77 per cent. of the fatal accidents occurred inside the mines, and 10, or 21.23 per cent., on the outside.

Investigation showed that the majority of these accidents could have been avoided if that care which is necessary for the protection of life had been used by the victims themselves. It would be superfluous for me to write about the accidents and their causes in this district, as so much has been written on this subject by the other inspectors who gave their views founded on actual observation and investigation.

The mining of coal is a very hazardous occupation from whatever standpoint it may be taken. It requires skill and practice to become a good miner, one who can guard himself and those who may be working with him, from the many dangers that arise while he is occupied in the mines. A few of these dangers I shall call particular attention to. First, falls of coal and rock, which are the cause of the largest per cent. of accidents in the mines. Two-thirds of such accidents are due to carelessness on the part of the victims.

It may be that a prop is necessary to be placed under a bad piece of rock which has become dangerous from a blast just fired, or a piece of rock is to be pulled down, as the case may be; or a blast is to be fired in the overhanging top coal, which has become unsafe from the constant blasting under it. The above are some of the causes of the accidents. Now for some of the reasons for not attending to the above. I find upon investigating them, in regard to standing props, they would be too close to the face and be blown out by the blasts. The top coal was not undermined sufficiently to get a good blast in it, and the risk is taken to load the car. These are some of the excuses given. Is there any wonder that accidents occur so frequently?

Again, the firing of blasts and handling of dynamite. In firing of blasts I find from investigation that very few of them occur if the miner has any distance to go to a place of safety, which is generally a cross-cut, as the match is not cut and lighted as he takes it from his box, which gives him ample time to get away. But how different when the place of safety is close at hand. The match in my opinion is cut and often so close to the powder that the miner is fortunate to get safely away before the blast goes off. And often the miner is seriously injured or killed before he gets turned around from lighting the match, by the explosion of the blast.

Dynamite, which has become so general in use in mining, is an-

other source of danger to the miner, principally in the way of handling and thawing it, which a number of the miners are in the habit of doing, namely, thawing it with the blaze of their lamp while they hold the stick of dynamite in their hands. There is seldom an escape from instant death when it explodes under such carelessness.

### By Falls of Coal, Slate and Roof

Samuel Lomendro, miner laborer, in No. 14 shaft, Pennsylvania Coal Company, was instantly killed February 7, at the face of breast by being struck on the head by a piece of rider coal while in the act of shoveling back coal from the face to his car.

Andrew Pojdin, miners' laborer, was instantly killed in the Baltimore No. 2 shaft, Delaware and Hudson Company, February 12. In my investigation of this accident I found the rock which fell on him was cut off by slips and could not be seen before the accident.

Anthony Snegil, miners' laborer, was instantly killed in the Henry shaft, Lehigh Valley Coal Co., February 23, by fall of rock at face of breast. His miner, Anthony Withcos, had tried to take this piece down by barring it and had failed to do so. The miner was told by the adjoining miner to put a prop under it, which he also failed to do, and in about one hour afterwards it fell and caught his laborer, with the above result.

John Flannagan, miner, was fatally injured February 26, by fall of rock in No. 1 shaft, Pennsylvania Coal Company. While mining out on top of the bottom bench of coal a large piece of rock became loosened from his mining and fell on him, injuring him so that he died after being taken to his home.

Edward Loftus, Miner, in Baltimore tunnel, Delaware and Hudson Company, was fatally injured March 11, and died same day. Loftus had fired a blast in the mining bench and after returning to the face of his breast and examining the same, a large piece of rock, which become loosened by the blast, fell on him.

Vetal Kransiki, miners' laborer, in the Baltimore tunnel, Delaware and Hudson Company, was instantly killed March 21, by a fall of top coal. The miner, Charles Smith, had fired a blast in the top coal, which failed to bring all down. The miner cautioned his laborer not to go under the top coal as he would fire another blast in it and bring it down. While the miner went for his drill the laborer started to shovel coal from under it and was killed.

Anthony Mortitus, miners' laborer, was fatally injured May 1, in No. 14 shaft, Pennsylvania Coal Company, and died same evening at the Pittston hospital. He was laboring for his brother. They were told to take this piece of rock down by the adjoining miner,

John Mildren, but paid no attention to him, thinking it would stay up until they got the coal out from under it.

Daniel Davis, miner, was fatally injured July 18, in No. 1 shaft, Pennsylvania Coal Company, and died same evening, after being taken to his home. While mining out some loose coal under the top bench in his breast a large piece of the top coal fell on him.

Joseph Novitiskie, car runner, was instantly killed by a fall of roof rock July 21, 1903, in No. 14 shaft, Pennsylvania Coal Co. He was running a loaded car out of a breast and when close to the gangway road the car jumped the track, knocking out a prop which was three feet from the track he was running the car on. He then sent the driver into the gangway to bring out a car and he sat down at the prop which was knocked out to wait for the driver. The rock fell on him and came very near falling on the driver.

John Lisowski, miner, was fatally injured August 6 by a fall of rock at the face of his breast and died August 9. The accident occurred in No. 11 shaft, Pennsylvania Coal Company. The rock which fell on him was what is called a bell. A prop had been placed very close to this rock, showing that the miner had failed to have detected the nature of it, as the slips around it could not be seen until it fell.

Henry Peterman, miner, was instantly killed August 7 by a fall of rock at the face of his breast, in Coal Brook slope, Lehigh Valley Coal Company. As John Williams, the mine boss, was making his rounds through the working faces he came to the above miner's breast and found him and his laborer working under a very bad roof. He ordered them both out and told them not to load any more coal in the car until they took the rock down and secured the place. They came out, giving him to understand they would comply with his orders. After the boss had gone they went back to finish loading the car and told the runner, who was standing close by, that the boss must think they were fools to take the rock down, for as soon as the car was loaded they would quit the place. But before the car was loaded the rock fell on them, killing the miner and seriously injuring the laborer.

Martin Walsh, laborer, was instantly killed in No. 4 shaft, Pennsylvania Coal Company, August 20, by a fall of rock at face of his breast. Walsh's miner, Thomas Gerrity, had a hole drilled in the black rock to fire down. Walsh told him he should not do it, as he wanted to finish loading his car first, and while they were finishing the car the rock fell.

Joseph Colo, laborer, was instantly killed in No. 7 shaft, Pennsylvania Coal Company, August 24, by a large piece of rock falling from the roof in the shape of a saddle back. The rock running to a feather edge all around it. Could not be detected until it fell.

John Shedlock, miner, was instantly killed November 30, in the Heidelburg No. 2 shaft, Lehigh Valley Coal Company. Shedlock was driving the gangway and had fired a blast in the face and after returning to examine what it had done a large piece of rock which had been liberated by the blast fell from the roof on him.

### By Mine Cars

Anthony Telershaski, driver, was fatally injured January 29, in No. 5 shaft, Pennsylvania Coal Company, while driving a trip of loaded cars along the gangway road and going to bump them up against others which were in front of him, his mule turned out on the contrary side to what the driver expected, and he was caught between the car and mule.

James Conyngham, driver, was killed March 23, in Pine Ridge shaft, Hudson Coal Company. This boy went up in a breast to run a loaded car out and told the miner to pull the blocks. The car did not run as freely as was expected so the boy went down the breast to sprag off and in doing so was following the car along the side when he was caught by a prop which stood close to the track.

Timothy Ford, miner was instantly killed May 8, by a runaway trip of cars on the inside slope No. 14 tunnel, Pennsylvania Coal Co. Ford had come out to the foot to go home and was standing on the branch with some other men when they heard the cars coming back. Ford made to cross the slope and was caught by the car as the manway was on the opposite side of slope. He was told not to go by the men.

George Langdon, miner, was fatally injured June 24, by a loaded car being run down his breast by the runner, in the Baltimore No. 3, Delaware and Hudson Company. Langdon had gone to the adjoining breast on some business and returning came through the cross-cut into his own breast and stepped on the track as the car was coming. It struck him, knocking him down, injuring him that he died next day.

Ferdinand Theil, company laborer, was killed July 27, in Ridgewood slope, Traders' Coal Company. Theil went to drive in a boy's place who did not come to work, and while coming out the gangway sitting on the bumper of the car he tried to unhitch the stretcher from the car and fell on the track and was run over by the car.

William Llewellyn, timberman, was fatally injured July 10, in the mineral Spring slope, Lehigh Valley Coal Company, while driving in his brother's place while he went for his pay, and taking an empty trip of cars in the gangway. He was standing on the bumper of the head car when the stretcher caught in a latch, causing the mule to stop suddenly. The car forced him against the rear end of the

mule causing a rupture of some of his intestines. He died next day.

Matthew Ripka, runner, was fatally injured December 2, in the Hoyte shaft, Pennsylvania Coal Company. While waiting for empty cars, he went out along the gangway road and met the motor coming with a trip of empty cars. He tried to get on the front end and fell, the motor squeezing him. He died next day.

### By Gas

William Moaks, miner, was fatally burned by an explosion of gas in No. 14 shaft, Pennsylvania Coal Company, May 21, and died May 26. He was employed in cleaning up the rock and refuse and taking up the bottom coal in a place driven for a plane. After working for an hour or so he started to explore the old workings with his open light and came in contact with a small amount of gas on top of a fall, which he ignited with his lamp, burning himself so that he died in the hospital. What took him away from his place of work he refused to say.

George Selfrick, miner, was fatally burned by gas in No. 14 shaft, Pennsylvania Coal Company, August 4. He asked the fire boss the condition of his breast and was teld there was gas in it, and not to go near it until the brattice men put up a length of brattice for him. He went into the gangway and stopped at the foot of the breast for a short time and then went up above the top cross-cut and ignited the gas.

Robert Walker, driver, was fatally injured by an explosion of gas in No. 14 shaft, Pennsylvania Coal Company, December 3, and died after being taken to his home. The fire boss, the boy's father, had made his examination and found about one foot of gas up in a breast the second from the gangway face, and placed rails across the place and wrote "Danger—Cas—Keep Out" on them. The mine not working that day and having empty cars the gangway was at work. The fire boss had gone for help to put up brattice to remove the gas, when the laborer Andrew Broniovitch crossed over the rails and went up in the breast igniting the gas with his open light. The concussion threw the driver off the car against the rib, killing him.

# By Powder and Dynamite

Harry Korrilla, miner, killed December 2, in No. 6 shaft, Pennsylvania Coal Company. While at his box going to make up powder to fire a blast, using dynamite, he took his lamp to thaw it and holding the stick of dynamite over the blaze, it exploded, injuring him so badly that he died same evening.

#### By Blasts, Etc.

Joseph Jack, miner, was fatally injured June 11, in the Prospect shaft, Lehigh Valley Coal Company, by a blast he was firing in his breast. He had ignited the match and retired to a place of safety, and after waiting the time he thought necessary he went back. When he got close to it the hole exploded. He died same day.

John Roth, miner, killed July 7, in No. 9 shaft, Pennsylvania Coal Company. He had prepared his hole for firing and cut his match too short, not giving himself time to get to a place of safety before it exploded.

Charles Terelock, miner, instantly killed July 13, in Chapman shaft, Hillside Coal and Iron Company. While driving a cross-cut through the pillar he prepared a blast in it and got to a place of safety, and after waiting a sufficient time, as he thought, for it to go off, he returned and as he got to the opening of cross-cut it exploded, killing him.

John Zeder, miner, killed August 22, in the Henry shaft, Lehigh Valley Coal Company, while firing a blast in his breast he cut his match so short that he only got a few feet from the mouth of the hole when it exploded on him.

Michael Pechuck, miner, killed September 3, in the Ridgewood slope, Traders' Coal Company. While firing a blast and before he got to a place of safety, he was struck by the flying coal. Where he was found went to prove that he must have cut his match too short.

Michael McGinty, driver, was instantly killed November 6 by a blast of six holes in the rock tunnel No. 11 shaft, Pennsylvania Coal Company. This driver came down the shaft about 9 P. M. to drive the cars of rock out of the tunnel after the rounds of shots had been fired. The chargeman and his helper were the only persons working in the tunnel, as the holes had been drilled on the morning shift. McGinty had gone in from the foot of shaft and passed the entrance to the tunnel as the chargeman and his helper were making the connections on the wires. They did not see him or know he had come down the shaft and would have to pass them at the firing station, which was on the gangway out from mouth of tunnel about 150 feet. They fired the six holes and in going back into the tunnel, which was over three hundred feet in, they found the boy-dead, struck by the flying rock in the tunnel, about two hundred and fifty feet from the opening.

Polo Grazie, miner, and Joseph Russ, laborer, were killed November 25 in the Clarence slope, Clarence Coal Company, by a rock blast while in the act of tamping the same. They had drilled a hole in the top rock and charged it with four sticks of dynamite and had one round of tamping on the powder when it exploded, instantly

killing the miner, Russ living until night. In my investigation of this accident I failed to find any copper tamping bar or a stick, so I am of the opinion they used an iron tamping bar.

### Falling Down Shafts, Slopes, Etc.

Joseph Yesmont, laborer, was instantly killed February 19, by falling down No. 8 shaft, Pennsylvania Coal Company. This laborer, with two other laborers, came out to the Marcy vein foot to go home. As it was late the engineer was out attending to the fan when they rang the bell to be hoisted, and not getting a cage when they rung for it, Yesmont told the other two he would go to the other shaft and get up. They advised him not to go, as they would get a cage soon, but he went. He must have opened the gates and in reaching for the bell wire fallen into the shaft, as his body was taken out of the sump at the Red Ash vein next morning. The gates were closed as the Marcy vein in this shaft which he fell from is not in use.

#### Miscellaneous Causes, Inside

Thomas Martin, shaft footman, in No. 6 shaft, Pennsylvania Coal Company, was fatally injured January 10 by a piece of ice falling down the shaft and striking him on the head while he was leaning over the shaft opening and calling down to the footman at the Red Ash vein. Martin got off the cage at the Marcy vein, while the other footman continued down to the Red Ash. Martin died the same evening.

Michael Ignatez, runner in Midvale slope, Lehigh Valley Coal Company, was instantly killed May 6 by a set of double timber knocked out of place on the passing branch, and the collar striking him on the head. While running a trip of empty cars which had a few T iron rails on them to the branch on a grade of 2 per cent., one of the rails was jarred over the side of car and caught the timber, knocking it out from under the collar, which fell on him as he was in the act of spragging the cars.

George Peters, driver, in Baltimore No. 2 shaft, Delaware and Hudson Company, was instantly killed August 14, by being caught between an empty mine car and side of shaft by the Engineer hoisting before he got the bell to do so. Peters was in the act of taking the empty car off when he was caught.

# By Cars, Outside

Edward Sheriden, track layer, was fatally injured February 13, at the Henry colliery, Lehigh Valley Coal Company. While laying

a track on the outside to branch condemned coal from the mines on, the locomotive came with a trip of empty mine cars and was shoving them onto the branch at the head of shaft close to where Sheriden was at work. Seeing the trip coming he went to take his tools off the track and was struck by the cars. He died February 15.

John Semock, company laborer, was killed March 2, at the Henry washery, Lehigh Valley Coal Company. While Semock and two other men were unloading coal from a railroad car into wagons below the washery, Joseph Evans, the car runner, was running a large gondola down on the branch where the men were unloading the car. They saw the car coming and thinking the cars were going to bump very hard began climbing over the side. Semock went over the front end of car and was knocked off when the cars bumped. The car he was unloading ran over him. The men should have stayed in the car as there was no danger to them there.

Cartie Monahan, culm loader, was killed April 23, at the Ewen breaker, Pennsylvania Coal Company. The locomotive engineer, Wm. Smith, had three empty culm cars in the trip, which he pulled up above the chute, as was the custom, and Monaghan got on the front end of the cars to drop them under the chute to load them. In some manner he fell off the car, which passed over his body, instantly killing him.

Lewis Sebast, car loader, was killed June 16, above the Consolidated breaker, Hillside Coal and Iron Company. He and George Smith, the other car loader, went up on the empty branch above the breaker to drop two large gondolas down to load them under the breaker. Sebast took the first car and started it out, when it stopped about twenty feet from the others. Sebast called to Smith to come with his car and give him a bump and start the car out. Smith did so and started the car out. Sebast was on the front end of car attending the brake and was knocked off the car, which ran over him.

John C. Mills, company laborer, was fatally injured July 27, while crossing the culm car track at the Baltimore No. 5 breaker, Delaware and Hudson Company. Just at quitting time in the evening, Mills started from the breaker enginehouse to go home, and to take a short cut went to cross the culm car track, which passes close to engine house. The culm cars run by gravity from the plane to the culm pockets to be loaded, and Mills being dull in hearing, stepped on the track and was struck by the cars. He died after being conveyed to his home.

Anonia Ginsppe, company laborer, was killed by being run over by a gondola railroad car close to breaker, November 30, Prospect breaker, Lehigh Valley Coal Company. Ginsppe was in the act of cleaning out the culm from a trough and track at the lower end of the breaker and was told to look out for the cars. Stephen Wasko while running a large steel car loaded from under the chutes, and on the rear end of car, failed to see Ginsppe, who was struck by the car and killed. Ginsppe had been employed at this job for ten weeks before the accident.

### By Machinery

Nicholas Beonka, plateman, killed May 29, in the Heidelburg No. 2 breaker, Lehigh Valley Coal Company. Beonka went down from the plater where he was at work to push the coal off the bars over the merchant rolls which had stuck on them. It was not necessary for him to get close to the rolls, as they were situated three feet below the top of the fence, which was built around them. He had no occasion to get over the fence to start the coal on the bars, but he must have done so to be caught as he was. In my investigation of this accident I found the rolls as safely protected as could possibly be. What caused him to climb over the fence I cannot say or imagine.

### By Suffocation

Matthew Ganridge, slate picker, smothered in culm pocket, December 4, in the Pine Ridge breaker, Hudson Coal Company. How this boy came in the chute is a mystery, as no person saw him go down. About fifteen minutes before his body came through the gate as the loaders were drawing the culm into a car, the boy came down to the loader and told him that the chute was blocked and to draw the culm. There is no occasion for any person to get into the chute, and it is impossible to fall into it, as all the openings to the culm pocket is the chute from the platform, which is 5x10 inches, and a trap door which had not been opened, as it was found shut after the boy was found. How the boy got into the chute or pocket no person appeared to know.

### By Boiler Explosions

Malichi Cavanaugh, fireman, was killed July 16, at the Aveca collery, Avoca Coal Cimpany, Limited, by the explosion of one of the eight boilers in the fire room. There were two flue and six cylinder boilers that generated steam for the colliery. Just as the colliery was about to start work the explosion occurred by one of the flue boilers exploding. I immediately went and investigated the cause and found that the explosion was caused by Cavanaugh, the fireman, turning the water into a dry boiler, as the feed valve to this boiler was found open and he was found close to the valve. The explosion was a terrific one as six feet of the front portion of the boiler was driven over six hundred feet away. The other boilers were more or less disturbed on their foundations.

### Miscellaneous Causes, Outside

William Neimeyer, Carpenter, employed by the Lehigh Valley Coal Company, in the erection of their new breaker at the Mineral Spring colliery, was instantly killed January 2 by a plank falling from the top of breaker and striking him on the head while he was at work on the ground. The loftsmen were moving the gin or hoisting pole on top of breaker when one of the guy ropes caught under a plank which was lying from one bent to another, causing it to fall.

#### Condition of the Collieries

The collieries of this district are comprised of 22 breakers with 39 separate openings. The distance apart of the extreme ones is about twelve miles. They are in fairly good condition, with the exception of two, which were not as they should be at the time of my last visit, but I suppose they are now in better condition, as they have notified me to that effect. Some of the above openings have miles of gangways and breast roads to be traveled. Two-thirds of these openings give off explosive gas, requiring a large volume of fresh air to keep the workings in a healthful condition. There is a constant watch kept on the ventilation current by the fire bosses or assistant mine foremen, whose duty it is to make a careful examination of the working faces in the morning before the workmen enter. The collieries are all well supplied with ventilating fans of the Guibal type, which furnish the necessary air. The roads are in fairly good condition, kept free from standing water and debris, with ample room on one or both sides of the track so that cars can be passed while in motion. The collieries are all supplied with a hospital inside the mines, with a full supply of whatever is necessary to relieve the injured, as the law requires. In my opinion the place for the hospital should be on the surface close to the mine opening, as the injured person wants to be taken out as soon as possible.

# Improvements by the Lehigh Valley Coal Company

The new breaker at Mineral Spring colliery of the Lehigh Valley Coal Company, of which I made mention in my last report, has been completed, and began operations March 16, 1903. A new shaft for hoisting coal and another shaft for second opening was sunk from the surface to Red Ash vein, a distance of 430 feet. The shafts have been connected in the above seam. A Scranton Compound Duplex pump, 32x36x12x36 inch, with a 12-inch column, was installed in the Old Baltimore slope of the above colliery, which will supply wash water to the breaker. A complete installation of 1,000 horse power Babcock and Wolcock boilers was made in a new brick building erected for them. A pair of new engines was

placed at the head of slope to hoist the coal to breaker. Likewise a pair of engines was erected at the head of Coal Brook slope to hoist the coal.

At the Prospect Shaft a brick addition to the boiler house was made enclosing a 250 horse power B. & W. boiler. A new brick engine house has been completed. In the Midvale slope on different levels. Three rock tunnels were driven from the Hillman to Brookley veins, which will be used for the transportation of coal.

In the Hillman slope a rock tunnel was driven from the Hillman to the Bowkley veins.

At the Henry colliery the hoisting shaft was extended from the Baltimore to Skidmore veins. A rock tunnel was driven through an overlap to the five-foot, 220 feet. The second opening tunnel is being driven at present.

The two new shafts begun in 1902, were sunk to Red Ash vein, a distance of 675 feet from the surface. A brick engine house 34x72 feet was erected for the hoisting engines of these shafts.

The Wyoming shaft, the old wood cribbing from the surface to the rock, was replaced by concrete, which makes a good job at this shaft.

At the Heidelburg No. 1 slope a new rock plane, 18 degree pitch, was driven from the lower split to the upper split of Red Ash vein, a distance of 212 feet. The second opening was driven on a 30 degree pitch. A rock slope is being sunt from the Marcy to Ciark vein, also a second opening shaft for same.

A new 12-foot diameter ventilating fan was erected. A new brick boiler house was built, enclosing a 450 horse power return tubular boiler. Dispensing with the old boiler plant.

# Improvements by the Delaware and Hudson Company

At the Baltimore tunnel the General Electric Company has installed an electrical haulage which handles all the coal from the Red Ash vein to the mouth of tunnel, doing away with the use of a tope haulage plant and hoisting plant at No. 4 shaft. The Stanton vein slope has been extended 250 feet. A new breaker is in course of erection to prepare the coal which is now taken to No. 5 breaker for preparation.

# Improvements by the Hudson Coal Company

A new breaker has been completed at Pine Ridge with a new steel head frame erected over the shaft. The foot of the shaft has been remodeled by brick arching and a chain hoist put in for handling the empty cars. To accomplish all of the above work at the foot of shaft three rock tunnels were driven a total of 357 feet. Likewise a rock tunnel was driven from checker to Ross vein, a distance of 246 feet.

At the Laffin colliery the No. 4 slope was sunk 500 feet. The No. 3 Rock slope was driven from the Marcy to Red Ash vein, a distance of 321 feet. New hoisting engines have been placed in position to hoist the coal from the above slopes.

### Improvements by the Clarence Coal Company

A new breaker was built with a capacity of 500 tons per day. It went into active operation May 1, 1903.

A new fan of the Guibal pattern, 12 feet in diameter, was erected on the return air shaft to furnish ventilation for the inside workings.

### Mine Foremen's Examinations

The examination of applicants for certificates of qualification for mine foremen and assistant mine foremen was held in this district on the 9th and 10th of September, 1903, at Pittston, Pa. The board of examiners was H. McDonald, Mine Inspector; J. L. Cake, Supt., and John J. Morahan and David P. Williams, miners.

The following twenty-one applicants for mine foremen were recommended to the Chief of the Department of Mines for certificates:

#### Mine Foremen

John J. Hoban, Michael Gilroy, Michael Healey, Hamlet Corrigan, Peter Parry, Wm. J. Williams, Roland F. Jones and John S. Campbell, of Avoca, Pa., Frank Hanahoe and George Bradley, Michael Madden, Richard Harris and George Rowan, of Pittston, Pa., James Pollard, Henry Northoff and John P. Daley, of Luzerne, Pa., Morgan E. Griffiths, of Taylor, Pa., Thomas Ninnis, of Duryea, Pa., Maurice Finn, Parsons, Pa., Michael S. Martin, Port Griffith, Pa., and James H. Gibbons, Hudson, Pa.

Twenty applicants for assistant mine foremen's certificates were recommended.

#### Assistant Mine Foremen

Gwilym Evans, Caleb Jones, William Coleman, John Noonan, West Pittston, Patrick Walsh, Alfred M. Hefferan, John King, James Weston, Pittston, Charles Cottel, Edward F. Reilley, Avoca, Joseph Chynoweth, John J. Martin, Port Griffith, August Zitterman, Michael J. Brady, Luzerne, Daniel R. Edmunds, Parsons, David J. Thomas, Plains, Thomas Sheehan, Thomas Reidy, Wyoming, Thomas Hooper, Maltby, Thomas McNamara, Miners Mills.

# Sixth Anthracite District

LUZERNE AND SULLIVAN COUNTIES

Kingston, Pa., March 1, 1904.

Hon. James E. Roderick, Chief of Department of Mines:

Sir: I have the honor of transmitting herewith my first annual report as Inspector of Mines for the Sixth Anthracite District for the year ending December 31, 1903.

The statistical information regarding production, employes, accidents, etc., is given in detail as required by law, together with a few remarks on the competency of miners, the condition of the mines, and causes of accidents.

Respectfully submitted,

P. M. BOYLE, Inspector.

### Sixth Anthracite District, 1903 SUMMARY OF STATISTICS

Yumber of mines in district,	40
Number of mines in operation,	40
Number of tons of coal produced,	4,549,970
Number of tons shipped to market,	4,136,797
Number of tons sold at mines to local trade,	91,947
Number of tons consumed at mines in generating steam	
and heat,	$321,\!226$
Number of persons employed inside the mines,	7,359
Number of persons employed outside,	3,029
Number of fatal accidents inside the mines,	42
Number of tons produced for each fatal accident inside,	108,333
Number of persons employed per fatal accident inside,	175
Number of fatal accidents outside,	4
Number of persons employed per fatal accident outside,	757
Number of wives made widows by fatal accidents,	24
Number of children orphaned by fatal accidents,	36
Number of non-fatal accidents inside of mines,	69
Number of persons employed per non-fatal accident in-	
side,	107
Number of non-fatal accidents outside,	12
Number of persons employed per non-fatal accident	
outside,	252
Number of steam locomotives used inside,	. 1
Number of electric motors used inside,	10
Number of fans used for ventilation,	38
Number of gaseous mines in operation,	26
Number of non-gaseous mines in operation,	14
Number of new mines opened,	1
Number of old mines abandoned,	1
Transfer of old infines abandoned,	1

# TABLE A.—Sixth Anthracite District, 1903

### PRODUCTION OF COAL

Names of Companies	Tons
Lehigh Valley Coal Company,	1,109,346
Pennsylvania Coal Company,	610,407
Temple Iron Company,	600,959
Kingston Coal Company,	451.705
Delaware, Lackawanna and Western Railroad Company,	280,124
Clear Spring Coal Company,	234,010
Stevens Coal Company,	184,653
Raub Coal Company,	151,617
People's Bank, Receiver (Black Diamond),	141,892
Delaware and Hudson Company,	105,651
Robertson and Law,	91,890
Wyoming Coal and Land Company,	88,667
Connell Anthracite Mining Company,	120,475
Northern Anthracite Coal Company,	74,790
W. G. Payne and Company,	69,397
W. B. Gunton,	66,737
Warnke Coal Company,	167,650
-	
Total,	4,549,970
	:
Production by Counties	
Luzerne,	4,287,968
Sullivan,	262,002
Total,	4,549,970

TABLE B.—Sixth Anthracite District, 1903

Fatal and non-fatal accidents; number of tons of coal produced per accident; number of persons employed; number employed per accident

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	Number of employes outs	315 101 6600 6600 455
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Fatal Accidents	Outside	
Fate	əbianI	9144 E84 9 91444 94
	Names of Companies	Kingston Coal Co., Delaware, Lackawana & Western R. R. Co., W. G. Zayne and Co., Temple Iron Co., Weight Valley Coal To., Woming Coal and Land Co., Stevens Coal Co., Stevens Coal Co., Clear Spring Coal Co., Delaware and Hudson Co., Penestyvania Coal Co., Penestyvania Coal Co., W. B. Gumon, Comell Anthracite Mining Co., W. B. Gumon, Comell Anthracite Coal Co., W. B. Gumon, Totals and averages for district,

TABLE C.—Sixth Anthracite District, 1903 Classification of Fatal Accidents

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TABLE D.—Sixth Anthracite District, 1903 Classification of Non-Fatal Accidents

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			January. February. March. April. Abril. May. June. Colly. September. November. December.

Occupations of Persons Killed or Fatally Injured Inside and Outside the Mines TABLE E.—Sixth Anthracite District, 1903.

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	Total outside	get ent i ped i ped	414
	All other employes	-	2.1
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	Slate pickers (men)		:
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	All other employes		:
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	Door-boys and helpers		5.1
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	Assistant mine foremen		
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Occupations of Persons Injured Inside and Outside the Mines TABLE F.—Sixth Anthracite District, 1993

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	Slate pickers (men)	
Outside	Slate pickers (boys)	61
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	Plackshifts and carpenters	
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		01 \ 10 C C C C C C C C C C C C C C C C C C
	7]] other employes	01 10 10 10 10 00
	uəm yany men	
	Deor-boys and helpers	
Inside	Drivers and runners	
Ins	Miners' laborers	::::::::::::::::::::::::::::::::::::::
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		Total in the last team
		January. January. March. April. May. July. July. Aquillary. Societailer. November. Fortale.

### TABLE G. Sixth Anthracite District 1903

Nationality of Persons Killed or Fatally Injured Inside and Outside the Mines

	American	 English	nish .	Polish	Humgarian	Italian	Slavenian	Lathuanian	Austman	Lustian	To tade
January, February, March,				4					1	1	2 3 5
April,					i			1			4
July August, September,	1		. 1	1		1	1	1			2
October, November,	2 2							1 1			5 3
Totals,	11	1	3	11	1	4	6	5	3	1	46

TABLE H.- Sixth Anthracite District, 1903 .

Nationality of Persons Injured Inside and Outside the Mines

	American	English	Welsh	Irish	German	Polish	Hungarian	Italian	Savonian S	Lithuamian	Austrian	Totals
January, February, March, April,	1 2	1						2			 1 1	
May, June, July	1	1		2		2 2			2		1	
August September, October	2					3 2				1 2		
November, December,	1					1 2		1 2	2 2			1
Totals,	17	5	-1	3	1	51	1	7	- 9	7	3	`

Operators and mines. Kind of openings. type and size of fans, size of furnaces, volume of air produced by fan or furnace per minute, number of splits of air currents, number of persons employed inside, and quantity of air produced for each employe per TABLE I.-Sixth Anthrucite District, 1903

						-		
nad a	Average number of cubic feet per minner provided for sach percen	305	372	489	401	311 478 834 672	347 661 324	
FILOS	Number of persons employed size	210	458	152	196	955 170	364 218 376	11
each employe	Number of cubic feet per telino is successing out at outlet	141,300	270,745	128,380	145,000	33.800 35.500 13.000 67.300	126,330 150,000 122,000	
	Total duantity to sir per Islo Till ni Buits ni Suismorio estudia di Statione de 1940	117,100	170,185	74,380	78,60	28, 600 33, 500 12, 500 64, 000	126,330 144,600 122,000	
Tor nagnnord	Number of cubic feet of sir per minute entering the mine at inlet	130, 700 \$1, 700	225,775	121,280	169,000	33, 500 33, 500 12, 700 64, 000	124,650 142,000 120,000	
an	Number of splits of air currents	7		್ಷಾ	a	635455	0 00 t-	
quantity of	Power nsed	Steam,	Steam,	Steam,	Steam,	Steam, Steam, Steam,		Steam,. ]
ann	Name of fan	Guibal, Guibal, Guibal,	Dickson, Dickson,	Guibal,	Guibal,	Guibal, Guibal, Guibal, Guibal,	Guibal, Guibal, Guibal,	Guibal,
iniaine,	Water gauge developed—in	22.55	5.5	8:3	1.7	00	 8	6.j
	Number of revolutions per	140 S6 S0	120	9.2	8	110	8888	OS .
ford	Tepth of blades in feet	80 to 80	9.1	73%	9	co : : :	ರಾ ೧೯ ೧೦ ೧೦	41/4
na ford ma control and	test mi sebald to dibiVI	& 170 ∞ 6-	6.2	00	9.9	3.10	612 612 613 613 613	20
	Diameter of fan in feet	13.4 4.65.4	818	25	20	a : : :	20 20 20	17
namper of P	notalilation of ventilation	Fan, 2 Fans,	2 Fans, [	Fan,	Fan,	Fan, Natural, Natural, Natural,	2 Fans, (Fans, Fans, _	
carrents, na	Gaseous or non-gaseous	Gaseous, Gaseous,	Gaseous,	Gaseous,	Gaseous,	Non-gas. Non-gas. Non-gas.	Gaseous, Gaseous,	
or all can	guinego lo baiA	Shaft, Shaft, Shaft,	Shaft,	Shaft,	Shaft,	Tunnel, Tunnel, Slope,	Shaft, Shaft,	
minute manner or spines or	Names of Operators and Mines		Delaware, Latrawanna and Western R. R. Co.	W. G. Payne and Co.	People's Bank, Receiver. Black Diamond,	Raub Coal Co.  Louise colliery—Mt. Thomas,  Klondike,  Bennett slope,  Waddell's,	Temple Iron Co.  Forty-Fort,  Mt. Lookout,	

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273	6528V895	16	Ē	á	17	111	99733 2333	5		. 113
169,000	73,000 104,730 65,100 110,720 47,300 97,660	65,355	125,984	9,5,6 %			10 P. A. A. A. A. A. A. A. A. A. A. A. A. A.	2.5.400	135,360	
139,600	28, 460 53, 000 64, 011 25, 080 77, 080 84, 080 67, 080	61,385	96,765	199, Cot					1 18.	
164,009	9.12. 8.1. 1.1. 1.1. 1.1. 1.1. 1.1. 1.1.	9.	116,240	1985, 960	137.600	- B	99999 844148	i ñ	, B ) (6:	
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Steam.		Steam	Steam,	Steam,	Straim	Steam,	XXX minimizers X	Steam,	Electric.	
Guillal,	Course Co	Garbal,	Gurbal,	Guibal,	Guibal,	Guilbad		Warshell.	Electric, Electric,	
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88	្រុក្ខាត់និងក្នុង	1	8	នភ	17	1.0	55582 5	<b>=</b>	9	
2 Fans,	Fan, Fan, Fan, Fan, Fan, Fan,	Fan,	Fan,	2 Fans, [	Lan,	Fan	Fan. Fan. Fan.	Fan	: Fans.	Natural,
Gaseous,	Non-gas. Non-gas. Gassous, Gassous, Gassous, Gassous,	Non-gas.	Gaseous,	Gaseous,	Non-gar.	Nett-gas.	Garages Carrents Carrents Carrents	N. L. sact.	Non-gas.	Nem-gas.
Shaft,	Tunnel, Slope, Shart, Shart Shart Shart Shart	Tunnel	Slope,	Shaft	Shaff,	September		Shift ti	IN St	Dritt,
ي ج	Mountein tame!  No 4-foot Stope Exerce collecty—feet Ash shalt,  Totals and Marcy,  North and Checker Someon collecty five shalt,  over Shalt,  columba shalt,	Wy minz Cod and Land Co. Crifith's codity,	Stevens Coni Co.	Clear Spring, con Co.	Delaw de and Bodsen Co. Lengelpffe, como	Raty-did,	Performance of Co. Barrian No. 1. Barrian No. 1. Barrian No. 1. Barrian No. 1. Barrian No. 1. Barrian No. 1. Barrian No. 1. Barrian No. 1. Barrian No. 1. Barrian No. 1.	Marray In. 19. Comments Co.	Comp. F. Order its Coal C.	W. B. Gunsten.

Operators, Location of Collieries, Railroads, Etc. TABLE 1.—Sixth Anthracite District, 1903

Railroad to Mine	D. L. and W. D., L. and W	D., L. and W. D., L. and W.	D., L. and W.	D., L. and W.	Lehigh Valley	Lebigh Valley Lehigh Valley Lehigh Valley	Lehigh Valley Lehigh Valley Lehigh Valley	Lehigh Valley Lehigh Valley Lehigh Valley	Lehigh Valley	Lehigh Valley	D., L. and W.
P. O. Address	Kingston, Kingston,	Kingston, Kingston,	Dorranceton,	Dorranceton,	Luzerne,	West Pittston, West Pittston, West Pittston,	Wilkes-Barre, Wilkes-Barre,	Pittston, Pittston, Pittston,	Wyoming.	Pittston,	Thomas,   Pittston, D., L.
Name of Super- intendent	Morgan Rosser,	H. G. Davis,	W. O. Williams,	Patrick Kelly,	William Thomas, .	George Steel, George Steel, George Steel,	F. E. Zerbey, F. E. Zerbey, F. E. Zerbey,	Thomas Thomas, . Thomas Thomas, . Thomas Thomas, .	S. B. Williams,	D. W. Evans,	George O. Thomas,
P. O. Address	Kingston,	Scranton,	Kingston,	Plymouth,	Luzerne	Scranton, Scranton, Scranton,	Wilkes-Barre, Wilkes-Barre, Wilkes-Barre,	Wilkes-Barre, Wilkes-Barre,	Scranton,	Scranton,	Pittston,
Name of General Superintendent	R. S. Mercur,	R. A. Phillips,	W. T. Payne,	James B. Davis,	S. J. Tonkins,	F. H. Hemelright, F. H. Hemelright, F. H. Hemelright,	S. D. Warriner, S. D. Warriner, S. D. Warriner,	S. D. Warriner, S. D. Warriner, S. D. Warriner,	F. H. Clemons,	H. W. Kingsbury,	J. L. Cake,
County	Luzerne,	Luzerne,	Luzerne,	Luzerne,	Luzerne,	Luzerne, Luzerne,	Luzerne, Luzerne, Luzerne,	Luzerne, Luzerne,	Luzerne,	Luzerne,	Luzerne,
Names of Operators and Colliferies	Kingston Coal Co. Kingston No. 1 shaft, Kingston No. 4 shaft,	Delaware, Lackawanna and Western R. R. Co. Pettebone No. 1 shaft. Pettebone No. 2 shaft,	W. G. Payne and Co. East Boston shaft,	People's Bank, Receiver. Black Diamond shaft,	Raub Coal Co. Louise slope and tunnel,	Temple from Co. Harry E shaft, Forty Fort shaft, Mt. Lookout shaft,	Lehigh Valley Coal Co. Mathy shaft and tunnel. Exeter—Pittston shaft. Exeter—Red Ash shaft.	Seneca—Coxey shaft. Seneca—Twin shaft. Seneca—Columbia shaft.	Wyoming Coal and Land Co. Griffith tunnel,	Stevens Coal Co. Stevens shaft and slope,	Clear Spring Coal Co. Clear Spring shaft,

Luzerne, W. A. May, Seranton, Willian W. Inglis, Scranton, Gree and Wyonning Valley Luzerne, W. A. May, Seranton, William W. Inglis, Seranton, Gree and Wyoning Valley Luzerne, W. A. May, Seranton, William W. Inglis, Seranton, Gree and Wyoning Valley Luzerne, W. A. May, Seranton, William W. Inglis, Seranton, Gree and Wyoning Valley Luzerne, W. A. May, Seranton, William W. Inglis, Seranton, Gree and Wyoning Valley	E. R. Pettehone, . Scranton, Delaware and Hudson	Luzerne, J. M. Robertson, Moesle, John Hastey, Avoca, tare and Wyoming Valley	yelliy Valley	is hugh Valley	M. J. Murray, Dunmore, P. H. Mongan, Lepez Lebigh Valley	Frederick Warkne, Scrauton,
				W. L. Connell Serantea,		
Seranton Seranton Seranton Seranton Seranton	Scranton	Avora			Lyrz	
W. Inglis, W. Inglis, W. Inglis, W. Inglis,	tteboue, .				engam	
William William William William		John III.			P. H. M	
	Scranton,					:
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A. May	C. Rose	M, Rohel	B. Gun	L. Com	J. Muri	derick .
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Luzerne, Luzerne, Luzerne, Luzerne, Luzerne,	Luzerne, C. C. Rose,	Luzerne.	Sullivan,	Sullivan,	Sullivan,	Luzerne,
Pennsylvania ('oal ('o, Barmun No, 1 shaft, Barmun No, 2 shaft, Barmun No, 3 shaft, Central No, 13 shaft, Central Law shaft,	Delaware and Hudson Co. Langeliffe shart and tunnel,	Robertson and Law. Katydid slope,	W. B. dunton. Lykens Celliery drift, Sullivan, W. D. Gunton, Bernice,	Connell Anthracite Coal Mining Co. Bernice drift, Sullivan,	Northern Anthracite Cad Co. Murray shaft,	Warnke Coal Co. Dunyea Washery,

Number of tons of cond mined in each colliery, number of days worked, number of persons employed, number killed and injured, number of kegs of powder used, etc. TABLE 2.-Sixth Anthracite District, 1903

Number of horses and multi-s	26	ಟ್	83	30	100	94	98 89	199
shimmayb to shaned to godinank besu	Sec.	4.877	4,877	5000	S, n00	14,3	3, 683 5, 150 33, 825	42,658
besu tebued to sged to reduing	15,245	7,416	1917	. S98. ;;	2,546	\$4.55 1.45	9,960	25,740
Number of non-fatal accidents	4	9.	3	-44	LO.	21	====	2
Number of first account	ده :	Ç1	G1				00	F
Number of employes	911	g 3	620	21	97.60	418	718 485 589	1,729
Number of days worked	, H	£3		1.5	16;	173	882	172
suct at these to actionhera intelle-	451,705	9,333	280,124	6.,897	141,892	151,617	294, 954 110, 874 195, 131	600, 959
Number of tons sold to local sections and used by employees		6,559	2,036	1	2. r04	9,631	3, 1992	11,484
Mumber of tons used for steam and heat at collicries	27,000	1,160	23, 460	4,562	99, C00	14,600	28,948 17,594 40,(21	FIG. (2)
Supplier of tons of coal shipped by rail or otherwise	124,705	242,234	219, 65	61,708		1 2	204, 016 92, 682 148, 275	SN4, 974
				' i			: : :	:
County	Luzerne,	Luzerne, Luzerne,		Luzerne,		,	Luzerne, Luzerne, Luz-rne,	
Na see, of Operators and Collieries	Shatts No. 1 and 4,	Delaware, Lackawanna and Western R. R. C., Pettebone colliery, Pettebone washery,	Totals,	W. G. Payne and Co.	People's Bank, Receiver Black Diumond,	Lauise, Raub Coal Co.	Harry E. Pemple Iron Co.	Totals,

Totals in this column are averages.

126 105 89	320	28	26	90	NO NO	37	22	120	16	44.	17		1, 23\$
146,363 84,518 11,300	212, 181	5,025	28, 225	8,100	2,724	10,984	1,940	2,793	1 2	4,766	(H)		250.843
19, 957 19, 759 15, 168	37,384	4,497	7,861	9,351	5,734	976,2	7,126	19,44	1,178	3,523	2,500		151.158
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781 721 655	2,170	241	416	569	S1-80	212	525	1,204	164	330	154	, co	-
242 755 154	\$25 \$25	100	\$ 57.7	150	199	330	181	101	141	190	186	1	
337,751 257,385 257,010	1,109,346	88, 667	184,652	231,010	105,651	91,890	249,41	610, 407	66,737	120,475	74,790	167,650	4.549,970
6, 659 2, 979 6, 170	16,848	2,443	3,673	13,320	1,396	1,128	2,839	67.67	1,359	1,041	2,18	11,900	01,947
18, 965   28, 792 17, 567	65, 324	11,200	11,000	10,000	£62.7	3,500	7,952	17,206	985	8,594	3,503	3,000	. 221, 226
489, 127 304, 514 233, 273	1,027,214	75,024	166,980	210,690	96,411	57,262	238,628	5,00,353	61,443 .	110,840	69,141	152,7:0	4,136,797
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Luzerne, Luzerne, Luzerne,		Luzerne,	Luzerne,	Luzerne,	Luzerne,	Luzerne,	Luzerne, Luzerne,		Sullivan,	Sullivan,	Sullivan,	Luzerne,	
Exeter, Lehigh Valley Coal Co. Malthy, Seneca,	Totals,	Wyoming Coal and Land Co.	Stevens Coal Co.	Clear Spring,	Delaware and Hudson Co.	Robertson and Law	Pennsylvania Coal Co. Central colliery. Barnum colliry,	Totals,	W. B. Gunton Lykens drift,	Connell Arthracite Mining Co. Bernice,	Northern Anthracite Coal Co. Murray Jonne shaft,	Washery.	Grand totals,

Solum bus session to roofmus.	1-19 1-19 1-19 1-19 1-19 1-19 1-19 1-19
Number of pounds of dynamics	014-01X-144-21 87-23-14-23 87-23-14-23 87-23-14-23 87-23-14-23 87-23-14-23 87-23-14-23 87-23-14-23 87-23-14-23 87-23-14-23 87-23-14-23 87-23-14-23 87-23-14-23 87-23-14-23 87-23-14-23 87-23-23-23 87-23-23-23 87-23-23-23 87-23-23-23 87-23-23-23 87-23-23-23 87-23-23-23 87-23-23-23 87-23-23-23 87-23-23
besu rebwed to sgam to redumN	면 대한 이 대한 역 보고 있는 기계 기계 기계 기계 기계 기계 기계 기계 기계 기계 기계 기계 기계
Number of non-fatal accidents	464000800000000000000000000000000000000
stabioos fatal to redamin	60 이런 무료하면 이 61 이러 모두
s∍yolqma to redmuX	표명성 등 원명 보고 등 등 등 등 등 등 등 등 등 등 등 등 등 등 등 등 등 등
Number of days wesheries)	48888653888885EE88
snot ni Isos to noiteubouq Istol'	28, 133 28, 133 28, 133 11, 50 28, 63 28, 63
Number of tons sold to local trade and used by employes	11 10 10 10 10 10 10 10 10 10 10 10 10 1
Number of tons used for steam and heat at collieries	27, 000 28, 460 29, 460 29, 100 29, 100 20, 200 14, 000 17, 200 17, 200 18, 304 17, 200 18, 304 18, 304 18, 304 18, 304 18, 304 3, 000 18, 300 18, 304 18, 304
Number of tons of coal shipped by rail or otherwise	2,8,8,8,8,8,8,8,8,8,8,8,8,8,8,8,8,8,8,8
County	Luzerne, Luz
s and Collieries	Western R. R. Co
Names of Operators	Fineston Cal Co.  Felawate, Lackawama and W. G. Payne and Co.  Foodle's Bank, Receiver, Temple Fron Co.  Temple Fron Co.  Wy ming Cal Co.  Wy ming Cal Co.  Clear Spring Coal Co.  Clear Spring Coal Co.  Penavare and Houlson Co.  Penavare and Houlson Co.  Penavare and Houlson Co.  Penavare and Houlson Co.  Polaware and Houlson Co.  Polaware and Law  Compell Anthracite Mining Compell Anthracite Coal Co.  Totals, Co.  Totals, Co.

TABLE 2-Continued

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	ojt	Capacety in gallons per mini	2 51 21	<u> </u>	10	4, 6.8	) 2 7	, c	1 8 1 4 4 1 4 4	11.74	<u></u>
	Suj.	Number to surface	-	21	+ 11 +			=	:14	s.	-: -
		Jownst astau prod.	58 51	1,880	1, 415	2:		\$ .25.	<b>E</b> 9.2	,P	
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		Horse power	- E	' គឺផ្	05.2	3	. <u>/</u> ::			1,100	250 <u>1</u>
	of Bailers	TeluduT		41.2	5.	r -	2	e	/ / / / / -	. 51	(*)*
	Number of	Horse power	p. 7.	<u>\$</u>	540			1 32	5	1 = 2.1	
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		County	Luzerne,	Luzerne, Luzerne,		Luzerne,	Luze rne,	Luzerne,	Luzerne, Luzerne,		Luzerne, Luzerne,
		Names of Operators and Collieries	Kingston Coal Co	belavare, tanskawanna and Western E. E. Pettakane colliery.	Totals,	· · · · · · · · · · · · · · · · · · ·	People's Bank, Receiver 1	Louise.	Herry E. Temple ten eu. Florty E.t. Mt. Leokout, 1	Ty tals,	Eveter. Lehigh Valley Cal Co Malby.

TABLE 2-Continued

			Number of		Boilers		Lock	Locomotives			15.	0	l aa		
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Names of Operators and Collieries	County	Isoirbni	se bower	aslu	лэмод эз.	il herse power	tur		etric	asses hower	squar to tedar aster to surface	snolfsg ni yjione	on behivered to innute—gallens	mber of electric d	gmos sis to redu
		CN	.—— то <b>Н</b>	dnT	10.FI	Tor	sej2	Ti A	j	[5	uN w	Cal	Que	пN	nX
Seneca,	Luzerne,	9	1 ISO	1 20	2,950	3,150	es	:		24   1,331	11 6	5,500	5,500	-1	1
Totals,		:	9006	5	5,075	5,975	52		61	66 4,176	6 13	12,100	9,900	C1	1
Wyoming Coal and Land Co.	Luzerne,			22	527	100	-			9 4	450 2	240	110		1
Stevens Coal Co.	Luzerne,	et .	350	00	1,100	1,450	-			9 2,2	245 1	800	200		
Clear Spring Coal Co.	Luzerne,	7	250	7	1,000	1,270					61	1,200	600		
Delaware and Hudson Co.	Luzerne,	6	270	2	275	515	-			10 4	451 1	006	009		
Raty-did,	Luzerne,			9	460	460	-			61	213	400	250		
Pennsylvania Coal Co. Central colliery. Barnum colliery,	Luzerne,	1 :::	430	9	906	430	65.64	i		20 19 1.2	777 7	8,938	3,348		
Totals,		17	430	9	900	1,330	5			2,071	T. S	9,599	3,550		
Lykens drift, W. B. Gunton	Sullivan,			C1		175								:	:
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		Sullivan,			1	5,215
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Antl		n Al		War		<u>, ;</u>
Connell Anthracite Mining Co.		Northern Anthracite mine shaft,				d tot
Con		No No		, X.		Franc
Connell Anthracite Mining Co.		Northern Anthracite Coal Co. Murray mine shaft,		Warmte Coal Co. Luzerne		_
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TABLE 2-Recapitulation

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8 2 2-3 2 1	164 3,215
5 <u>4</u> 225 2005 F	
8 % End 80 F	

TABLE 3.—Sixth Anthracite District, 1903 Number of Each Class of Employes at Each Colliery

	Grand total inside and outside	145	406	691	37.8	121	577	1,204	330
l de	Potal outside	12	128	13	127	63	133	278	뭐
Employed Outside	All other employes	63	ź	639	41	45	88	126	8
loyed	Book-keepers and clerks	©1		9	୍ଦା	C3	6161	4	63
s Emp	(nom) srodoiq obsis		일	12	98		8.7	09	
Persons	Slate pickers (boys)	133	8	4	63	25	임위	2	7
Jo	Engineers and fremen	5	12	13	12	0.	121	320	L
Occupations	Blacksmiths and carpenters	ıc	<u> </u>	10	60	00	in t-	12	-
upa	nemerol obisho	-	-	-				ଚୀ	-
ŏ	Superintendents	1-1	-	-		-	1 ::	1	
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Inside	All other employes		6			5.	19	17	
ed Ins	nem yany men	11	15	67	67	<del></del>	÷ 000	1-	1 8
Employed	uəmdund	61	-r	6	c1	61	60	4	
	Door boys and helpers	77	6	46	t-		23	30	4
Persons	srennur bas srevird	cī.	15	-25	41	18	50	124	30
o suo	Miners' laborers	39	84	180	12	20	164	346	15
Occupations of	Niners	6.7	104	200	96	50	168	320	150
o°	Fire bosses and assistants		-	9	-	_ :	-	-	_:
	Assistant mine foremen			কা	-		€00	60	C1
	Mine foremen		0.1	-	ş-4	-	0101	7	_
	County	Luzerne,	Luzerne,	Luzerne,	Luzerne,	Luzerne,	Luzerne. Luzerne.		Sullivan.
	Names of Operators and Collieries	Wyoming Coal and Land Co.	Stevens Coal Co.	Clear Spring Coal Co.	Delaware and Hudson Co.	Robertson and Law	Pennsylvania Coal Co. Central colliery. Barnun colliery.	Totals,	ling Co.

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Northern Anthracite Coal Co.	W. B. Gunton Lykens collecty drift,	Shaft No. 1. Shart No. 1.	Totals,	Delaware, Le kawamna and Western Jr. R. Co. Pert bone or hery. Perteksare was bery.	Totals,	W. C. Payne and Co. East Bosbon,	Prodes Back, Receiver Black Damend,	Raub Coal Co.	Harry E. colliny, Fourty Four collegy, Montre L. Scott collegy	Totals,	Mather, Fyster, Sener,	T stals.	Wasteel	Graps) Chals, control or control

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is Em	Slate pickers (mem)	4448 84444444418	F-60
Persons Employed Outside	Slote bickers (boys)	######################################	761
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ation ,	Blacksmiths and carpenters	· · · · · · · · · · · · · · · · · · ·	62
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) ŏ	Superintendents	nee je jie in jewe jee	=
	sbism LuoT	## ###################################	7.359
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Occupations of Persons Employed Inside	Company men	15884446 158887P	1.93
nploye	Puntpinen	8400004CH   VOIN-4400	68
ns Er	sted hers and helpers	408646 69 69 69 40 65 69 69 69 69 69 69 69 69 69 69 69 69 69	240
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Jo su	Miners' laborers	828 16 0 3 4 8 8 5 5 5 8 8 4 5 5 5 5 5 5 5 5 5 5 5	2,090
upatio	Minera	24588888888884E8	2,894
Occi	Fire bosses and assistants	H=0= = :::::::::::::::::::::::::::::::::	65
	Assistant mine foremen	H 63H 6361 H 60H 633164	22
	Mine foremen	HOIHHHTTHHOIHHHHOO:	81
	County	Luzerne, Luzerne, Luzerne, Luzerne, Luzerne, Luzerne, Sullivan, Sullivan, Luzerne, Luzerne, Luzerne, Luzerne, Luzerne, Luzerne, Luzerne, Luzerne, Luzerne, Luzerne, Luzerne, Luzerne, Luzerne, Luzerne, Luzerne, Luzerne,	
	Names of Operators and Collieries	Wyoming Coal and Land Co., stewars Coal Co., crear Spring Coal Co., belaware and Hudson Co., ledware and Hudson Co., connell Antimeter Mining Co., Somether Antimeter Coal Co., W. G. Ronton.  No. The State Coal Co., Co., Co., Co., Co., Co., Co., Co.,	Totals,

TABLE 3-Confinued

				7.	umber	of Days	Worke	Number of Days Worked Each Month in Breaker	Month	in Brea	iker			
Nature of Operators and Collieries	County	Kannuur		प्राप्	lin(A	Knk.	t ount	χμ <sub>1</sub> .	)snrnv	zaquiaide s	tod do	TodinovoZ.	T- d((((+)-+)	1 - 1
Wyaming Cool and Land Co. Griffith of Lo.	Luzerne,	21.6		5 1	12	16.7	13 24	1 2	: X	15.6	7 #	16.2	. ·	( - 3 )
Stevens addieny.	Luzerne,	23.9	20.7	0.45	5 5 7	5.5	60 31	i i	1.5	57	16.9	17.3	2	
Clear Spring Coull Co.	Suzerne,	51	. 6.08	11 11	: :1 :1	1 7	1 tr	= = = = = = = = = = = = = = = = = = = =	13.9	13.5	1 4.5	\$ . 1- 5-	2	, A
Delaware and Hudson Co.	Luzerne	19.6	18.3	19.4		17.0		17.2	₹ -	93	± 1			ے ا
Raty-did colliery,	Luzeme	1 13	2017	19.8		= = = = = = = = = = = = = = = = = = = =	១១ ១៣	. 2	e. Si	2	gent			ā
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Averages,		1-1-1	1.11	: 6 .	17	1 1		0 G	19.8	11.6		11.5	##  }}	12
Sermes officey dift.	Sullivan,	18.31	16.9	191	1 6	21	2.81	39.6	10	12.51		18.1	20 25	9
Northern Anthrecite Gerl Co.	Sullivan,	e i	11.8	03	.;			12	19.7	11.8	: E	- F	63	3
W. B. Gunton Lykous celliery defet	Sullivan	21		00	c.			9.6	60	1 1	1 5	E .	=	=
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TABLE 3-Continued

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	Zovember	21.	6.1	14.9	1-3	TW 6	12.9	133 13.6 17.7	12.6	E.
aker	tarlety)	11.4	11.2	13.9	=	11.9	1.1	11.2	11	13.5
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n Mounth	lengit.	17.5	111	13.5	18.6	1111	18,51	559 589	18.9	17
Number of Days Worked Each Month in Brenker	July.	18.4	9.2	1 ==	18.	855 1-1-1-	5	าสรี	2.2	17.7
s Work	aung	17.3	9.0	14.7	11.5	1811	15.6	, <u>1,77</u>	19.5	17.2
of Day	Дау	17.8		13.6	1.8	11.1	16.6	90.9 15.4	19.3	15.2
Number	lingA	18.5		17.6	15.7	1 11 12 15 15 15 15 15 15 15 15 15 15 15 15 15	2 4	554	1.0.1	15.5
	Матећ	2	2	31	16.7	13.6	17.7	822	65	15.6
	Pebruary	17.9	6.3	11.3	13	15.3	18.3	\$181E	3.4 F.E	16.6
	January	22.5	00	14.7	15:4	24.2	151	28.4	23.7	30.3
	Luzerne,	Luzern	Luzerne,	Luzerne	Luzerne		Luzerne Luzerne			
	Pelaware, Luckawanna and Western R. R. Co. Pettebone collery,	East Boston.	Posphe's Bank, Reserver. Black Diam tel.	Ranb Coal Co.	Temple from Co. Forty E. celliery. Forty Fort e lifery. Mount Lockout colliery.	Averages,	Lehigh Valley Cell Co. Byster, Seneva,	Averages,	Averages,	

TABLE 3- Recapitulation

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Number of Pays Werked Each Month in Breaker	oung	변화학원학자학 취취보고되다. 	
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C, unty		Lord etter. Lord e	
Names of Cherators and Collieries		Wy miths start out.  Stryings and Co.  Chark Spirits Co.  Of Lawring and United Strying Co.  Representation of Co.  Control Manager Co.  When the Control Co.  When the Co.	

TABLE 4.—Sixth Anthracite District, 1903 Fatal Accidents in and about the Mines

Nature and Cause of Acedent in Brief	Killed by a fall of top rock, inside.	Dietker clevators, outside.	. Killed by falling from a gondola under	Fants of sanct. Frankly injured by being run over by cars.	Instantly killed by a premature blast in	sangway, find by falling down the shart. Fatally injured by a fall of top coul,	Inside. Fitably finited by a fall of rock, inside. Killed by a trip of cars, inside. Fatally injured by a fall of top coal,	Figure 1 Figure 1 Figure 1 Figure 1 Figure 1 Figure 2 Fig	Killed instantly by a fall of top coal, in-	Fatter. Fragilies by being dragged by a	must. Insule. Fatally injured by a fall of coal, inside. Fatally injured by a fall of coal, inside. Instantly killed by a premature blast, in-	Fatally injured by being bumped between	Instantly killed by a fall of rock, inside. Killed by a premature blast, inside.
County	Luzerne, Luzerne,	Luzerne,	Luzerne,	Luzerne,	Luzerne,	Luzerne, Luzerne,	Luzerne, Luzerne, Luzerne,	Luzerne,	Luzerne,	Luzerne,	Luzerne, Luzerne, Luzerne,	Luzerne,	Luzerne, Luzerne,
Name of Colliery	Exeter,	Tear Spring,	Kingston No. 4,	Maltby,	Mt. Lookout,	Mt. Lockout,	Malthy. Forty Fort, Kingston No. 4,	Griffith,	Louise,	Barnum No. 2,	Harry E, Exeter, Seneca, Columbia,	Exeter,	Exeter, Kingston No. 1,
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Оссывайов	Miner,	Laborer, .	Laborer, .	Patcher, .	Miner,	Laborer, Laborer,	Miner,	Laborer,	Miner,	Driver,	Laborer, Miner,	Driver,	Miner,
Nationality	Polish,	Polish,	Russian,	Austrian,	lrish,	Polish,	Italian, Slavonian, . Lithuanian,.	Hungarian, .	English,	American,	Slavonian, American, Polish,	Lithuanian,.	Austrian,
Name of Person	Teter Stoddard,	George Wasaclais,	George Ruderick,	John Kishock,	William J. Nolan,	Alex, Rimshock, Francisco Corsinco,	Joseph Perrello, St. phen Dugal, Adam Tonelia,	John Hornick,	Charles Elton,	James Gaughin,	Mick Lavick,	George Gigorefsky,	Jacob Poumganis,
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eg broken by cars, inside,	· · · · · · · · · · · · · · · · · · ·	100	2 7 E	作作を受ける。	20	conveyors of reserved as the same of the s	# 12 ×	N 3	>.	C 7:	е ў.	2.	8-4	2 E 2 2
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Les broken by cars, inside. Dred July 39,	Extrally injured by be to counsht by haul-		Parally injured by a fall of rock, inside, historical killed by felling down the shoft both highest by fail of your little 18 Manages 16,5	chilled the a titll of top coult, misside titll of top coult, misside titll of top coult, missies titll of top coult, missies titll bijn titll by cars, missies family in jured by a fall of t p. covi.		18.0	Killed by a fell of rock, inside, despriy killed by falling of the eardare down the shart	£15	Catally injured by a full of term of the		Frank remodes a fall of top rock, me subs	Estably injured by a fall or boney cord,	Fatally arined by care insole Killed by fall of top reds, the degree by rank, the degree of the property was leader to be a shear to a way to be degree of the property of the	thereaty silled by falling down the shaft Kill. It a permature blast, insite, Fallit him: I by care, outside Fallit nijn: I by a prop falling on him inside,
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			Barnum No. 2, Harry E. Sweter,	Lyleens, Eveter, Harry E, Berniee,	Lykens,	Server, Twin,				:	- :	:	Forty Fort, Someon, Coxey, Mt, Lookout,	Mt. Lookont. Maltisv. Exerce.
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The	Charles Nafus,	Samuel Boresko	John Dadey, John Paylon, Staniy Viloskey,	Anthony Peade Anthony Musta S.dnor Sm les. Petrick I' ley,	Merl Hembury,	Anthony Gioucksis,	Peter Szefenk, Peter Reman,	George Taylor,	Stanley Gene ky,	Benjamin Ostrander,	J lan Massebra,	Lally Zidsumus	John Covill Joseph Shilth, Harry Williams	Louis Bouchap, Andrew Dolup, Mrs. Mustel, Frank Chard,
2c Analow Stash,	5	<i>U</i> .	55%	55552		4	24	00	.5	E V		15 I	545 545	1445
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TABLE 5.—Sixth Anthracite District, 1903 Non-Fatal Accidents in and about the Mines

Nature and Cause of Accident in Brief	Rus, broixin by falling into a rock chute in the breaker.  Burned on the face and hands by an expression of gas, prosin of gas, purel on the face and hands by an expression of gas, with hereton for home courbit between ear	and timber at top of shaft.  Kibs broken by fall of top rock in his lineast, Induced by fixed pieces from a premature blast in his breast, Purned about the face and hands by an explosion of cartridges of powder.  Out on the legs by an axe slipping while descent inhapses.	Runned about the face and hands by an explosion of gas, who so of gas, he are the best of the best of the best of the best of the best of the best of the best of the best of the best of the best of the best best of the best best of the best of th	Lorg problem by a fall of roof rock in the limbs.  Lord boken by a fall of rock in his breast. Forth logs broken by a fall of rock in his breast.  Lord boken by a runaway car in the mine.
County	Luzerne, . Luzerne, . Luzerne, .	Luzerne, Sullivan, Luzerne,	Luzerne, . Sullivan, . Luzerne, . Luzerne, . Luzerne, .	Luzerne, Luzerne, Luzerne,
Name of Colliery	Black Diamond, Kingston No. 4, Kingston No. 4, Seneca. Coxex shaft.	Stevens, Malthy. Bernice, Pettebone,	Seneca, Coxey shaft, .  Bernice, Mt. Lookout, Langeliffe, Harry E,	Seneca, Coxey shaft.  Black Diamond.  Exeter.  Harry E.
cignis to boltusM	M M M	M is K	vi vi ki ki vi vi	S KK K
V86	H 8 8 H	4 8 8 8	33 48 30 38	23 23 23
noiJastussO	Outside foreman,. Timberman, Brattice man, Headman.	Miner,	Miner.  Miner.  Company Jaborer,  Footman,	Mason, inside, Miner, Miner
Vationality	American, Welsh, English,	Ttalian Austrian, Polish,	Polish, Polish, Italian,	Austrian Italian,
Name of Person	7 George D. Carvy, 16 Edmund Roberts, 16 William Allen,	3 Raf-lo Pizenskie, 6 Martin Bradotzkie, 7 Thomas Lacoskey, 12 William Palmer,	11         Anthony Face.           16         William Bahunk.           21         Mick Koskie.           21         Anthony Dodow.           24         James Condon.	10 John Moore,           13 John Nowalk,           16 Angelo Boro,           27 Frank Peterick,
Date of accident	Jan.	Feb.		March 10 13 16 27

.   Both legs broken by falling from the	lane, by falling on a pile of go	the mine. Squeezed at top of slone between cars and	the rub of east. Leg broken by being run over and	nlosior	black powder while making a carridge.		he gukle by a	in his breas.  Foot banked by being caught in shaker.	serven in the breaker.  L'S briken by tabing from a car in the	mine. Hack bruised by a fall of coal while	is breast	car and the side or breaker.  Bruised about the bedy, and cut on the		Í.	vas left open, which caused the gas to	by cars he	against the car, when another car bampood him.	body and wire by	of rider coal in breast. Arm lee-ken by a noop reline on hem in	has treast. Burned about face and hands by an ex-	pl shop of gas.  Sy injured by the expleding of dynamite	Three of his ribs tractured by a fall of		becast, to one hands barreed, Darreet by an explosion of gas in his	dum
Luzerne,	Luzerne,	Luzerne,	Luzerne,	Luzerne,	Luzerne,	Luzerne,	Luzerne,	Sullivan,	Luzerne,	Luzerne,	Luzerne,	Luzerne,	Luzerne,	Largerman	ixuaei ne,	Luzerne,	Luzern	Luzerne,	Luzerne.	Luzerne,	Luzerne.	Luzerne,	Luzerne,	Luzerne.	Luzerne.
Barnum,	East Boston,	Clear Spring,	Harry E	Mt. Lookout,	Katy-did,	Black Distand,	Mt. Lookout,	Murray,	Clear Spring,	S neca, Twin,	Kingston.	Columbia, Senera,	Seneca, Twin,	Series Deriv		Exeter,	Block Drame Ld.	Pettellone,	S. nera,	Malthy.	Harry E	Parmum No. 2.	Harry E.	Harry E.	Petts bone,
M.	M.	υż	M.	vi	vi	M	M.	vi	υż	M.	wi	vi	v.	υģ		T.	M.	M	U.	M.	MI.	ű.	n;	v.	yi.
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Dock boss,	Laborer,	Headman,	Laborer,	Miner.	Laborer,	Carpenter,	Miner,	Slate picker,	Door tender,	Laborer,	Labore r.	Laborer,	Runner.	Driver,		Miner.	Miner,	Miner.	Laborer.	Miner,	Miner.	Laber c.	Miner,	Laborer,	Rumar.
American,	Slavonian.	Welsh,	Hungarian, .	Polish,	American,	American,	Pelish,	Slavenian, .	Slaveniam, .	Polish,	Austrian,	Polish	Irish,	Irish,		Polish	Slavonier	English	Polish,	Slavonian, .	Polish,	Americam,	Polish,	P lish,	American .
27 John Walters,	Andrew Sipus,	Isaac Thomas,	John Timeo,	Bronew Sierninskie,	Robert Decker,	George Keller,	Mick Grocoskie,	Stephen Jeruk,	George Yonko,	2' John Luminskie,	June 2 Danel Stevens,	A. Alex, Budzelick,	Patrok Judge,	Walter Riker,		Martin Novetski,	Stephen Chabowick,	Arthur Balcomb,	Ddward Smith,	Jeseph Youaniez,	e Mil. Novis,	W.Hata Jenkins,	William Jacketts,	E John Gridle,	1: Wilter Jones,
57	ši	71	[ +	§ ?	17	ás.	15	i i	77	ń	21		4	11		Ĝı	81	.1	1 -	t -		11		::	:-
		April					May				Jun-								July						

The state of the s	Nature and Cause of Accident in Brief	Leg broken by being run over on the slope	by cars. Log broken by a fall of rock in his breast. Log sque-zed in conservors in the breaker. Burned by black newler while in the act.		Squeezed between prop and car while un-	coupling ear, Burned about the hands and face by an	ryptosion of gas.  Leg between by a fall of coal in his breast.  Cut on band and wrist sprained by a fall.	of coal.  Leg dislocated by a rush of coal coming	down his breast.  Burned face and bands by an explosion	of gas in his breast.  Burned face and hands by an explosion	of gas in his breast. Squeezed between cars bumping together	on turn-out.  Burned on face and hands by an explosion	of gas. Burned on face and hands by an explo-	sion of gas. Cut on the head by a fall of rock. Leg broken by a fall of roal while barring.	out loves coal. Leg broken by a prop falling on him in	his breast.  Foot crushed by a motor running over it. Pruised about hips and legs by a correctioning over him.
	County	Luzerne,	Luzerne, Luzerne, Luzerne,	Luzerne,	Luzerne,	Luzerne,	Luzerne, Luzerne,	Luzerne,	Luzerne,	Luzerne,	Luzerne,	Luzerne,	Luzerne,	Luzerne, Luzerne,	Sullivan,	Luzerne, Luzerne,
	Name of Colliery	Clear Spring,	Seneca, Coxey, Maltby, Seneca, Twin,	Louise,	Griffith.	Forty Fort,	Pettebone,	Griffith,	Harry E,	Harry E,	Louise,	Pettebone,	Pettebone,	Pettebone, Kingston No. 4,	Lykens,	Seneca, Twin, Harry E.
	Married or single	- τά	i w ii	M.	vi	M.	N. W.	τά	υż	ω <u>·</u>	M.	υż	M.	K.S.	M.	S.K
	98V	63	29 29 29	135	20	26	48	27	40	97	31	25	99	19	10	18
the second secon	Gecupation	Trackman's helper	Miner, Slate picker, Miner,	Miner,	Runner,	Miner,	Miner, Laborer,	Miner,	Miner,	Laborer,	Driver boss,	Laborer,	Miner,	Laborer,	Miner,	Polish, Road cleaner, American,  Driver,
	Nationality	Polish,	Lithuanian, American, Polish,	English,	American,	Slavonian, .	Irish Polish,	Polish,	Polish,	Polish,	American,	Lithuanian,.	Welsh,	Lithuanian, ' Laborer, Polish, Miner,	English,	Polish
	Name of Person	Adam Farasavage,	Matthias Granis, Edw urd Kluge, Anthony Novocofski,	William Burns,	George Elsworth,	Frank Demareo,	John Conahan,	Peter Yeavorict,	William Bushes,	Joseph Dudish,	Cherles Morgan,	Joseph Yunoshom,	William Davis,	James Salokkes, Simon Yonski,	George Chisnell,	Simon Leppert, Edward Muday,
	Dute of accident	57	21 m 20	13	ŝ	ê,	6113	33	cc	17	П	18	118	13	19	24
			Aug						Sept.					Oct.		

Burnel by an explosion of gas in his breast, he leaving check door opened. Sorifeed by escaping steam from feel	pump.	Burned by an explosion of gas in his	Foot benised by being bumped between	cars in Ross venn. Fractured log by a piece of flying coal	from a blast. Foot squeezed by being bumped between	Hannis, and fitter burned by gas in his	breast, Hands and face burned by gas in his	brea : Some 5 and rib of breakt. Since 5: I between car and rib of breakt.	Fixe a state broken by a fall of top	Injured on the back by a fall of top rock	In he treast. Improved on the board and look by an ex-	Colline to the National Section of the Colline to the National Section of the Colline Section of the Colline Section of the Colline of the Colline Section of the Colline o	His paramed by a runaway car from a	One cyc injured and two fingers shot off	Equipment of property of the p	Notes with the late of the sens
Luzerne, .	Luzerne, .	Luzerne, .	Luzerne, .	Luzerne, .	Luzerne, .	Luzerne, .	Luzerne, .	Luzerne, .	Luzeine, .	Luzerne,	Luzerne, .	Luzerne, .	Luzerne, .	Luzerne, .	Luzerne,	Luz-rne,
Maitby,		Harry E	East Boston,	Stevens,	Harry E.	Malthy,	Madtby,	Pettebone,	Lanseliffe, fazeme,	Exeter,	Malthy,	East Boston,	Plack Diamond,	Mt Lookout	East Derton	Septect TAIN The
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Slavonian, Miner, 25 American, Fireman, 40		Miner, 34	Driver, 18	Miner, 40	Runner,	Miner,	Laborer,	Miner, 40	Polish, Laborer,	Miner.	Polish, Laborer,	Slavonian, . Driver, 16	Priver, 25	Minor,	İntiver,	Italian. Foothoun, 40 S.
Slavonian,	Welsh,	Polish, Miner,	Slavonian, . Driver,	Italian,	American,	German,	Slavonian, .	Lithuanian,. Lithuanian,.	Polish,	Lithuanian,.	Polish,	Slavonian, .	American,	Italian,	American,	Italian,
Frank Moore,	13 Thomas Powell,	16 John Bellas,	Mick Mattmihon,	Amelio Belomie,	1 Bernard Monahan,	Joseph Sabol,	Charles Zegaro,	William Cermeskie,	George Shontie,	Milky Nerviell,	John Sh pock,	Wass 1 Stefanko,	John Doik,	Joseph Mernichie,	James Jenkins,	Is Joseph Comas,
5 11	100	16	100	35.)		ret		01.01	- 1	1 -	0	Ξ		21	16	13
Nov.					Dec.											

# Fatal Accidents by Falls of Coal, Slate and Roof

Of the 42 fatal accidents inside, 22 were caused by falls of roof, coal, slate, or rock, a percentage of 52.38. This is outside of all reason, and I might say that nearly all of the accidents were caused through neglect or ignorance, or both, on the part of the men themselves. We have a certain class who are working in the capacity of miners who are not fit to labor. I very frequently find men working a chamber who cannot tell me their names, yet they are miners because they hold certificates as such. Among the non-English speaking class, just as soon as they get over the first scare and become a little acquainted with the mines, they want certificates as miners, and before the ink is dried on their certificate they will go to the boss for a chamber. Now while the certificates entitle them to mine coal, they certainly do not make them competent miners. The foremen know this as well, and better than anybody else, and while they are not held responsible for the competency and qualification of the men who hold certificates, they should exercise better judgment than to employ them to mine coal. I have spoken to some foremen on this question and they said they could not get good, careful and experienced miners to work in some veins as the coal was too hard. I would suggest that the boards of examiners demand better proof as to the length of time that candidates served in the mines as laborers before issuing certificates to them, because unless there is a very decided improvement made in this line, we will always have accidents through carelessness or incompetency. Now that the examining boards have it in their power we hope to see better results, and be able, when making out the report of 1904, to point with pride to the fact that the qualifications of miners have been raised to a higher standard.

Peter Stoddard, age 40 years, Polish, miner, was killed at the Exeter colliery shaft No. 1, Checker vein, January 10, 1903. He was working in the checker vein driving through the pillars, for a new haulage road. He broke through into an old chamber, and was in the act of working out some loose coal in the bottom, when without any warning a piece of rock fell on him killing him instantly. He was considered a very careful man and the accident was not due to carelessness.

George Wasaclais, age 23 years, Polish, laborer, was instantly killed February 4, 1903, by a fall of fire clay at the Clear Spring colliery. The miner was driving a cross cut between the gangway and the air-way. Wasaclais was loading a car of coal, when a portion of the roof gave way falling on him, causing instant death. The miner who was drilling a hole in the face of the breast at the time, claims that the prop which sustained this loose piece

gave away, because one end of the piece was much heavier than the other, and that was the cause of displacing the prop.

Francisco Corsinco, age 18 years, Italian, laborer, was instantly killed March 23, at the Exeter colliery in the Pittston vein by a fall of rider coal. This man worked for Lonbardo Urbosta as a laborer and while loading a car of coal, a piece of the rider coal fell on him killing him instantly. This rider coal is about eight inches thick and should be taken down before going under it so far, which was neglected by the miner.

Joseph Perrello, age 35 years, Italian, miner, was instantly killed at the Maltby colliery on March 25, 1903, by a piece of top rock. Perrello and his laborer were barring down a piece of loose rock when the piece fell on the car they were standing on. Perrello jumped back when another piece fell striking him on the head and crushing his skull.

Adam Tonelia, age 40 years, Lithuanian, miner, was fatally injured April 14, 1903, at Kingston No. 4, by a fall of coal in breast No. 266, on Williams west Ross slope. He told the laborer to stop awhile until he barred down a piece of loose top coal that was hanging. He stood on top of a piece of coal to raise himself higher so that he could better reach it with the drill. He put the point of the drill over to pull it down when his footing gave way, and he fell toward the face of the breast just as the piece was falling. It struck him on the head fracturing his skull, and he died that night at the Wilkes-Barre City Hospital.

John Hornick, age 38 years, Hungarian, laborer. was instantly killed on April 20, 1903, at the Griffith colliery, Wyoming Coal and Land Company), by a fall of rider coal in the six foot vein. He was barring out a piece of loose coal from under the rider, when it fell on him killing him instantly. He went under this piece against the orders of his miner who told him of the danger and warned him to keep away.

Charles Elton, age 60 years, English, miner, was instantly killed May 5, 1903, at the Louise colliery (Raub Coal Company) by a fall of coal. He was employed as a miner robbing pillars in the No. 8 lift of the Ross vein. He was shoveling coal back to help his laborer load the car, when a piece of coal gave way and fell on him without any warning. He was considered one of the most practical and experienced miners in the colliery.

Mick Lavick, age 38 years, Slavish, laborer, was fatally injured May 19, 1903, at the Harry E. colliery (Temple Iron Company). He was shoveling coal from the east side of the breast toward the road when a piece of coal fell on him causing a fracture of the left leg, and a severe contusion of the back. He was con-

veyed to the Wilkes-Barre Hospital where he died from his injuries on May 23, 1903.

Charles Coleman, age 26 years, American, laborer, was instantly killed May 29, 1903, at the Exeter Red Ash (L. V. Coal Co.). This man worked in the gangway for Chas. Babola, miner No. 216, who fired a blast in the face of the gangway and as soon as the blast went off. Coleman went to the face and started to pick out loose coal, when some of the top coal became loosened falling on him with the above results. His miner warned him not to go in, but to wait a few moments for the place to settle. He paid no attention to the warning as he was in a hurry to load the car so he could go home.

John Powell, age 42 years, Austrian, miner, was fatally injured June 11, 1903, at the Exeter colliery (L. V. Coal Co.) by a fall of middle rock. He was preparing to fire a blast in his breast No. 847, when a piece of middle rock fell without any warning on him, breaking his back. He was removed to the Pittston Hospital where he died June 12, 1903. He was considered a very careful miner.

John Daley, age 24 years, American, runner, was instantly killed July 11, 1903, at the Barnum No. 2 shaft (Penna. Coal Co.). He went into Fredericks place on east counter, Marcy vein to run out a loader car. The laborer was not quite through loading the car, so Daley sat down on a rail that the miners used for a platform waiting for the car. The driver, Wm. Collier sat near him looking at the miner drilling a hole, when without any indication the roof fell across the whole width of the gangway, catching Daley before he could get away, killing him instantly.

Stanley Vitoskey, age 26 years, Lithuanian, laborer, was fatally injured July 22, 1903, at the Exeter colliery (L. V. Coal Co.) by a fall of rock. The miner was starting a new chamber in the checker vein and was drilling a hole, when he (Vitoskey) went to pick the corner of the pillar. He gave only a few blows when the piece of rock fell on him injuring him so badly about the back and hips that he died at the Pittston Hospital, August 23, 1903.

Anthony Pendergast, age 71 years, Irish, miner, was fatally injured July 27, 1903, at the Lykens colliery (W. B. Gunton). He was employed robbing pillars. He was firing a blast in the pillar, and was preparing to drill another hole, and went to bar out some loose coal from under the top coal. He stood in front of where the top coal was undermined and began to pick out the loose coal. The top had a crack running through which the old man did not notice, when a portion of it suddenly fell on him. At first it was thought his injuries were only slight but he was hurt internally and died in about five hours after the accident. His advanced age no doubt was against him. Had he stood to one side or the other while barring he would have escaped the fall. This should be a

warning to others. Never stand in a position where the roof is any way dangerous, always make sure that it is safe before commencing to work out loose coal with either a pick or a bar.

Anthony Musta, age 48 years, Italian, miner, was instantly killed July 29, 1903, at the Exeter colliery (L. V. Coal Co.) by a fall of top coal. He was working in the face of his chamber when a slip of top coal fell on him, killing him instantly.

Patrick Foley, age 60 years, Irish, miner, was fatally injured on August 10, 1903, at the Bernice colliery (Connell Anth. Mining Co.) by a fall of rock. He was employed robbing pillars and was undermining the coal when a piece of top rock fell on him, injuring him so badly that he died in four days after the accident.

Peter Szefczyk, age 21 years, Polish, laborer, was instantly killed September 12, 1903, at the East Boston colliery (W. G. Payne & Co.) in the Ross vein. He was loading a car in the gangway, when a piece of top rock fell on him without any warning, crushing him almost beyond recognition.

Geo. Taylor, age 37 years, American, timberman, was instantly killed October 3, 1903, at the Forty Fort colliery (Temple Iron Co.) by a fall of rock. He was standing timbers under a bad roof at the foot of the eleven foot slope. Two other men were engaged in helping him at this and. They fired a hole in the top so as to make more height before putting up the collar. The shot did not take enough of it down and left the roof in such a dangerous condition that they were afraid to do any barring, so they decided to place a stick of dynamite on top of a loose piece that was opened from the roof. Taylor went to get the dynamite from the box and lost his light, and in coming back he apparently struck the prop that was partly holding this dangerous portion of the roof when it fell on him, killing him instantly.

Stanley Genosky, age 38 years, Russian, timberman, was instantly killed October 6, 1903, at the Exeter colliery (L. V. Coal Co.), while engaged with Enoch Francis and Ben Ostrander, in standing props in the Red Ash vein around a pump house between station No. 862 and No. 750. Genosky and Ostrander were sinking hitches for two props at the same time within about five feet of each other, and were fully aware of the daugerous condition of the place. Francis who was the leader of the gang went back a short distance to pull off his shoe as a nail was harting his foot. He was just sitting down when a large piece of coal fell on his two helpers, killing Genosky outright, and injuring Ostrander so badly that he died that same evening. The nature of this accident should be a warning to others, not to go under a dangerous roof without protecting themselves, first by standing a few temporary props to secure safely, before standing the permanent props.

Benj. Ostrander, age 37 years, American, mason helper, was fatally injured October 6, 1903, at the Exeter colliery (L. V. Coal Co.) by a fall of rock. He was removed to the Pittston Hospital where he died that same evening from the result of his injuries.

John Massebra, age 37 years, Slavish, laborer, was instantly killed October 12, 1903, at the Exeter colliery (L. V. Coal Co.) by a fall of rock. He went into chamber No. 272 to see and have a chat with the laborer who worked there, and while he was there talking the top rock fell on him, killing him instantly. It is a very bad practice to go around from one chamber to another, because being strange to the place a man does not know anything about the condition of the roof and is very likely to stand under a dangerous spot. The foremen should try to stop this practice whenever they see it done.

Lally Zidsumas, age 19 years, Polish, laborer, was instantly killed October 19, 1903, at the Pettebone colliery (D., L. & W. Coal Co.) by a piece of rider coal. He was loading a car in B airway, Hillman vein, when a piece of rider coal fell on him, killing him instantly.

Joseph Smith, Lithuanian, laborer, age 23 years, was instantly killed November 18, 1903, at the Coxey shaft (L. V. Coal Co.) by a fall of rock. Smith was employed as a laborer in the Marcy vein gangway, and was shoveling coal back from the face when a piece of rock fell on him, killing him instantly.

# By Cars

John Kishock, age 15 years, Austrian, patcher, was fatally injured by being run over by cars at the Maltby colliery (L. V. Coal Co.) on February 19, 1903. He went to set the switch for a trip of empty cars to run in on the branch. He signalled to the runner to come ahead and then stepped to the side to allow the cars to pass. It was dark and he apparently got bewildered and ran in front of the cars. He was caught, and dragged a distance of fifteen feet, his legs were badly mangled and he was bruised about the body. He died shortly after he was taken home.

Stephen Dugal, age 40 years, Slavish, laborer, was fatally injured March 30, 1903, at the Forty Fort colliery (Temple Iron Co.) by a trip of empty cars. He was traveling down the eleven foot slope on his way to work, and when near the foot of the slope he heard the trip of cars coming. A companion called to him to look out, but as this was his first day to work in the slope, he did not know which side to stay on and stepped in front of the cars. His body was so badly mangled that he died in a short time after.

George Gigorefsky, age 18 years, Lithuanian, driver, was fatally injured June the 5th, 1903, at the Exeter colliery (L. V. Coal Co.) by being squeezed between a trip of cars. He was taking a trip of empty cars from the foot of the shaft to the inside turnout. He was driving three mules and was spragging the cars on the top of grade to keep the cars from running back, when the leading mule turned around and in doing so caught the driver in the traces and threw him between the cars. The mules were still hooked to the trip and kept pulling back. His head was caught between the bumpers, fracturing his skull. He died shortly after.

Andrew Stash, age 40 years, Austrian, footman, was fatally injured June 20, 1903, at the Maltby colliery (L. V. Coal Co.). He was employed cleaning the slope and jumped on a trip of cars which were partly loaded with road coal. He was riding between the first and second car when the first car jumped the track. His leg was caught between the bumpers breaking it below the knee. He was taken to the City Hospital where he died on July 30, 1903 after an operation. When men are engaged at such work as cleaning slopes they should not ride on the cars from one lift to the other, because the cars are seldom uniformly loaded making it much easier for them to jump the track. Foremen should see that such a practice is stopped as it is a direct violation of the law. (Article XII, Rule 16). No person shall ride upon or against any loaded car, cage, or gunboat in any shaft, slope or plane in or about the colliery.

Charles Nafus, age 35 years, American, footman, was fatally injured June 23, 1903, at the Forty Fort colliery (Temple Iron Co.). He was employed as a footman at the south slope, and was riding into his work on the haulage road trip to the south slope. The trip was stopped as usual on reaching the curve near the south slope turnout. The runner said he gave the signal to go ahead, when the cars received a sudden jerk throwing the first car off the track. He gave the signal to stop, but before the engineer succeeded in doing so five cars were pulied off, causing a heavy strain on the guide pulleys and breaking them. The rope swept across the track stricking Nafus on the head, fracturing his skull. He died a few hours after at hospital.

Sidnor Smiles, age 24 years, Polish, laborer, was fatally injured July 29, 1903, at the Harry E. (Temple Iron Co). Smiles was laboring with Daniel Corrigan sinking a slope on the west side Red Ash vein. The engineer started to hoist a trip of two cars and as the grade is very light near the bottom, after the first pull the cars bumped together and uncoupled. Corrigan and the other laborer were near the safety hole, Smiles coming up after them. The uncoupled car jumped the track, pinning him between the car and the

rib. He was so badly injured that he died shortly after he was taken to the Emergency Hospital.

John Covill, age 19 years, American, driver, was instantly killed November 16, 1903, at the Forty Fort colliery (Temple Iron Co.) by falling under a car. He was employed as a driver on road five D, upper six foot vein. He was riding on the front end of the car and jumped off to urge the mule when he slipped on the rail and fell under the car. He was dragged a distance of about twelve feet, causing instant death.

Mike Mustal, age 24 years, Slavonian, loader, was instantly killed December 22, 1903, at the Exeter colliery (L. V. Coal Co.), outside by railroad cars. Mustal was employed as a loader at the breaker. He and another fellow laborer were running a car down the track, when an engine with a train of cars came in and struck the car in charge of these men throwing Mustal under, killing him instantly, the other man escaped uninjured. This accident happened about five o'clock in the afternoon and the crew claimed, that on account of the darkness they did not see the car until they struck it. This is a very poor excuse to offer. They should have sent one of the crew ahead to see that the road was clear.

## By Premature Blasts

Wm. J. Nolan, age 43 years, Irish, miner, was instantly killed on March 6, 1903, at the Mt. Lookout colliery (Temple Iron Co.) by a premature blast. He had drilled a hole in the bottom rock in his gangway and prepared the blast, and while in the act of lighting the squib the hole went off, killing him instantly.

Stanley Witka, age 27 years, Polish, miner, was fatally injured on June 3, 1903, at the Seneca colliery (L. V. Coal Co.) by a premature blast. He was engaged in tamping a hole when the charge went off, injuring him so badly that he died the same day. His laborer, Alex. Budzelick, was helping him to tamp the hole but was not seriously injured.

Jacob Powganis, age 34 years, Polish, miner, was fatally injured on June 20, 1903, at the Kingston colliery No. 1 (Kingston Coal Co.) by a blast. Powganis was employed as a breast miner in the Bennett vein bottom of No. 3 slope. He had prepared a blast, lit it and run to a place of safety. He thought he heard the hole miss and went back to relight it, when it went off, injuring him so badly that he died that day at the Mercy Hospital. An accident of this character should be a lesson to all miners, not to approach a missed hole too soon.

Andrew Dolup, age 48 years, Slavonian, miner, was fatally

injured on December 18, 1903, at the Maltby colliery (L. V. Coal Co.) by a blast. Dolup was firing a shot and after lighting the squib he went to a place of safety. He thought the shot had missed and went back to see when the shot went off, injuring him so badly that he died in one hour after. This is one of the many cases of too much haste.

# By Explosions of Gas

Samuel Boreskey, age 31 years, Polish, laborer, was burned by an explosion of gas on June 29, 1903, at the Clear Spring colliery. Boreskey had carelessly left the check door open, and as the place was giving off a considerable quantity of gas where the door was closed, it forced the gas down on him when it was ignited by his lamp, burning him about the face and hands. The accident was not considered serious at the time. The deceased objected to go to the hospital, and was being treated by a woman fire doctor. He died from the result of the burns on July 11, 1903. The fire boss made a tour of inspection in that section about two hours before the accident and found everything in good order.

# By Powder

Anthony Gloucksis, age 22 years, Polish, laborer, was instantly killed by an explosion of Forcite powder on September 9 at the Seneca colliery (L. V. Coal Co.) Gloucksis was working with his miner, helping him to clean up a fall of rock at the foot of the west side slope. They were getting short of oil and his miner, Simon Gilinskie, sent him to his gangway for some oil and gave him the key to the box. The distance from where they were working to the gangway, was about fifteen hundred feet. After the deceased was gone about fifteen minutes, the men heard a terrible explosion. They first thought it was an explosion of gas. They went toward the direction it came and they found the deceased in a mangled condition. It is thought that a spark from his lamp fell into a box of explosive caps. There was also about eighteen pounds of Forcite powder in the box at the time of the explosion.

# By Falling Down Shafts

Alex. Rimshock, age 40 years, Polish, laborer, was instantly killed by falling down a shaft on March 21, 1903, at the Mt. Lookout (Temple Iron Co.). Rimshock, the deceased was working

as a laborer in the eleven foot vein and came to the landing after the cage was signaled to hoist and was on its way up the shaft. He made an effort to get on but did not succeed. He clung to the cage until he reached the first bunton, when his head struck it, and he fell to the bottom a distance of about 90 feet. He was dead when picked up.

Jno. Paylon, age 42 years, Slavonian, laborer, was instantly killed July 15, 1903, by falling down the shaft at the Harry E colliery (Temple Iron Co.). He was working in the Ross vein, and was about to start for home after finishing his day's work. The footman, Geo. Cushel, when near the landing at the Ross Vein saw a Jight coming toward the shaft, and called out "are you coming up?" He received no answer to this call, so he signalled then to the engineer to hoist, when the cage was about three feet above the landing Paylon made a jump to get on, but only got his hands on the floor, when he dropped to the bottom a distance of about 60 feet. Those on the cage at the time warned him not to make any attempt to get on, but he paid no attention to them.

Peter Roman, age 16 years, American, doortender, was instantly killed September 22, 1903, by falling down a shaft at the Exeter colliery (L. V. Coal Co.). He was on the cage coming up the shaft after his work was done. There was several on with him. When the cage was about 50 feet from the bottom he fell off, and dropped to the sump. No person on the cage seemed to know anything about how it happened. They seem to think he got dizzy or weak and fell.

Louis Bouchard, Polish, miner, age 35 years, was instantly killed December 12, 1903, by falling down a shaft at the Mount Lookout Colliery (Temple Iron Co.). Deceased came to his death in a mysterious way. No one knows how he fell down the shaft. He was suspended a few days before for sending out dirty coal, and the foreman did not know he was working. He evidently was working with some other miner until his time of suspension would be up, and in doing so was trying to evade the bosses by going in early in the morning. The accident occurred about six o'clock A. M. The fire boss was at the foot of the shaft when he fell. He was dead when picked up.

# By Machinery

Frank H. Reese, age 16 years, American, slatepicker, was fatally injured January 27, 1903, by breaker machinery at the Pettebone breaker of the (D., L. & W. R. R. Co.). Deceased was employed as slate picker. The boss sent him to pull down the coal in the Chestnut chute from the elevators, and giving him a scraper, ordered him

to stand outside of the chute and keep it open, but instead of using the scraper as he was ordered he went into the chute and with his feet commenced pushing down the coal. He went too close to the elevators, and his foot was caught, dragging him in. He died about four hours after the accident at his home.

Merl Hembury, age 14 years, American, slatpicker, was fatally injured by breaker machinery, August 13, 1903, at the Lykens breaker (W. B. Gunton). This accident occurred about 11.45 A. M. Deceased was out of his place and disobeyed the rules. He was approaching the oiler for a chew of tobacco when his jacket was caught in the gearing of the conveyors. The oiler gave the alarm immediately to the slate boss who signalled to the engineer to stop the engine which he instantly did. Death was instantaneous.

## Miscellaneous Fatal Accidents

Geo. Ruderick, age 28 years, Russian, laborer, was fatally injured February 9, 1903, at the Kingston Coal Co.'s breaker No. 4. He was only working at this place a few days when this accident occurred, and no one knew how it happened. It is supposed he fell off a car. When found he was lying along side the track under the pocket, in an unconscious condition, and he died about a half hour later.

Jas. Gaughsin, American, driver, age 15 years, was fatally injured May 13, 1903, at the Barnum colliery No. 2 (Penna. Coal Co.). Deceased was taking his mule to the barn after his day's work was done, and in some manner his foot became fastened in the traces, the mule started to run away, dragging him for a distance of 600 feet to the foot of the shaft. He was hoisted to the surface, and sent home in the company's ambulance, where he died a few minutes later.

Harry Williams, age 21 years, American, breaker man on electric motor, was instantly killed November 27, 1903, at the Mount Lookout colliery (Temple Iren Co.) by a shock from an electric wire while assisting the motorman to make some repairs on the cable wire. He was standing on the rail at the time, and raised his head which came in contact with the trolley. The shock killed him instantly.

Frank Charli, age 39 years, Italian, laborer, was instantly killed December 24, 1903, at the Exeter colliery (L. V. Coal Co.) by a falling prop. Deceased was helping his miner, Mike Pasqual, to stand props. He slipped and one of the props fell on him, crushing his skull, causing instant death.

## Condition of the Mines and Improvements During the Year

The condition of the mines on the whole is very satisfactory. The ventilation is improved, the drainage is much better, and special efforts are being made in regard to propping roof. All these things I rigidly demand. The observance of the law, in reference to the employment of boys is also enforced to the letter. Only one case occurred in the district, where there was any need to resort to law, and was against the Avoca Coal Company. A copy of the whole proceedings in this case was forwarded to the Department.

#### KINGSTON COAL COMPANY

# No. 4 Colliery

They have put up a fuel conveyor line to boiler house, made some slight changes in the breaker and put down a number of bore holes to prove rock cover over Orchard vein.

## DELAWARE, LACKAWANNA AND WESTERN RAILROAD COMPANY

## Pettebone

A 20 foot ventilating fan, which was partly constructed in 1902, has been reconstructed and is now in working order, showing a very good percentage of efficiency. The erection of a locomotive boiler plant is in progress at this colliery, to be composed of 10 fire box locomotive boiler, which will be completed early during the year 1904. Three rock tunnels were driven through faults or anticlinals in the Hillman vein for development, transportation and ventilation. The Kidney vein has been opened in these shafts and developments will be pushed as rapidly as possible.

Pettebone washery, which has been practically idle during the year, has now resumed operations, and the refuse from the same is being placed in the Cooper vein of this colliery.

## RAUB COAL COMPANY

### Louise

Gravity plane at "Mt. Thomas," about 450 feet long, one pair of new 16x20 engines geared 4 to 1, with foundation and house complete for hoisting.

Outside.—Coal from Red Ash and Ross veins, on Eley tract, to foot of Bennett slope. Rope to run through bore hole, from surface to head of inside plane from eleven foot vein to Ross.

Inside.—No. 3 tunnel Klondyke, driven on mountain side from

surface to Ross and Red Ash veins, upper workings, serving as means of better ventilation, also as more convenient and safe entrance and exit to that portion of workings which are located so far from main opening.

#### TEMPLE IRON COMPANY

## Harry E Colliery

Outside.—On the hoisting shafts they have put in new 10 foot drum on the hoisting engines, clutch gearing, which enables them to hoist from either of the three levels with both cages, which is we think a very decided improvement. The old drum was an 8 foot diameter drum without clutch, with which they could only hoist from lower level with both cages at one time.

Inside.—Slope being driven in 11 foot vein from shaft level down towards basin, with plane going to outcrop on same line as slope, this will be slope and plane combined, with pair of 14x16 engines in place to operate the same.

#### Ross

There has been a tunnel driven from Red Ash to Ross vein, size 12x8 feet on a pitch of 15 degrees. This will be the outlet for coal from new slope and plane which is being constructed in Ross vein.

# Harry E. Colliery, Ross Vein

Inside.—There is also another tunnel from Red Ash to Ross, 10x6 feet on a pitch of 40 degrees which is return airway for new slope and plane.

The above mentioned improvements are the new work that is being done. Aside from that which would be more under the regular order of work, but which is improvements just the same, is the decided improvement in the ventilation which has been accomplished by the enlarging of the areas of airways both inlet and outlet airways at this colliery the past year.

# Forty Fort Colliery

Outside.—New breaker capacity 1,000 tons per ten (10) hours. This breaker was put in operation on June 9, with the most modern machinery for the preparation of coal.

Shaft.—Widened out cage ways and retimbered in the new from top to bottom with concrete wall  $2\frac{1}{2}$  feet thick, 20 feet from top down, all around the shaft. One new Sterling boiler 125 H. P.

Inside.—In the 11 foot they are extending the slope towards basin, size of slope 12x7. Ross vein they have reopened and extending slope towards basin, they are also extending plane which is in direct line with the slope. Size 12x7 feet. Have driven new tunnel from 6 foot to 4 foot vein, size of tunnel 12x7 feet. Have built a new traveling way separate and independent from the slope.

Inside.—Have built an additional airway (outlet) from 6 feet to 11 feet, size 10x6, which has made a very decided improvement in the ventilation.

# Mt. Lookout Colliery

Outside.—Put in breaker, four (4) sets of Reading jigs, and rearranged 6 sets of Christ jigs. Fuel conveyor from breaker to boiler room.

Inside.—Driving new slope from Pittston vein to Marcy (called No. 7 slope). One electric locomotive,  $7\frac{1}{2}$  ton, for work in chambers.

# LEHIGH VALLEY COAL COMPANY Maltby Colliery

A new brick boiler house, 120x5 has been constructed. Six sets, 200 H. P. each, or 1,800 H. P., B. & W. boilers are in course of installation. A number of additions and repairs have been made to the breaker, also betterments to the inside pumping capacity, and changes at the foot of the main hoisting shaft.

# Exeter Colliery

A brick boiler house is under construction, and 300 H. P., B. & W. water tube boilers are being installed therein.

A new compressed air motor haulage plant is under construction for the Red Ash shaft district. A brick house encloses a Norwalk three stage compressor, size  $20x24x14\frac{1}{2}x11\frac{1}{2}x5x24$ . A 15 ton air locomotive is on the ground. A six inch air pipe runs from the surface down the shaft to the inside haulage roads, total length of pipe, 3,700 feet. These roads are laid with 40-pound rails and special care has been given to the alignment and grading; in all, very favorable conditions now exist for a satisfactory haulage plant at this place.

New barns have been built in the Checker and Red Ash districts.

Pittston hoisting shaft and second outlet shaft completed from. Pittston vein to Marcy vein.

New Jeanesville compound duplex pump, sixe 20x38x10x18, with

new column complete, installed in Red ash district. New fire proof pump room built for same.

New safety gates built at Red Ash shaft.

New carpenter-blacksmith shop, 52x56 completed.

# Seneca Colliery

Several other improvements are under way, but as they are not completed you probably will not care for them. They are as follows:

Two tunnels, one 200 the other 300, through fault in property known as "Old Forge 88," in Twin shaft.

Two bore-holes, one 12 inch, the other 14 inch from surface to the Red Ash vein for drainage purposes. It is proposed to pump the water from this vein through these holes and do away with column pipes in shaft.

A shaft has been started to tap the Pittston vein about 500 feet below the Seneca breaker.

#### Seneca

Which includes the New or Coxey, the Twin, the Columbia, and the Phoenix shafts.

1st. At the Twin shaft the old wood fan-house was replaced by one of corrugated iron. This insures greater safety from fire, for owing to its proximity to the D., L. & W. R. R. danger from this source was always present with the old structure.

2d. The cribbing in the Twin shaft consisted of a single line of 12x12 hemlock timber. Upon this rested the shaft tower, sixty feet in height. The coal cars landed on fans and run off on a trestle twenty-five (25) feet above the ground. The said trestle extends a sufficient distance east of shaft to allow the passage of empty cars which are hauled from the breaker by a 12½ ton locomotive. The cribbing having been in place between nine and ten years began to crush and bulge into the shaft under the weight of the shaft-tower and trestle. Owing to these conditions it was decided to replace the old cribbing with one of concrete, and if possible, without delaying the operation of the shaft. This was successfully accomplished in the following manner.

The inside dimensions of the cribbing (old) was 12x17x35 in depth. In the line of old buntons several hard wood buntons one on another were placed in good hitches cut in the rock at foot of old cribbing. On these buntons rested a line of posts, six in all, which reached to a point above the top of old cribbing. By means of hydraulic jacks the overhead weight was taken off the old cribbing and placed on 12x16x40 oak timber that was put across the shaft, on top of posts.

and upon end supports. Having thus supported the tower and trestle no trouble was experienced in holding filling back, and taking out old cribbing. The concrete was put in with a thickness of three feet in the bottom and tapering to two feet on top.

#### STEVENS COAL COMPANY

Sunk new shaft, 12x24 to Red Ash vein.

Made opening in shaft into vein underlaying the Marcy vein.

Installing coal hoisting plant at new shaft.

Started up coal washery which is contained in one wing of the breaker.

Put in new 150 H. P. boiler at steam plant.

Made new opening from Red Ash slope workings through by roll to old workings on Slocum property, for ventilating purposes.

## CONNELL ANTHRACITE COAL MINING COMPANY

# Bernice Colliery

They have erected a modern anthracite breaker on their property, containing about a million feet of lumber, equipped with the latest modern machinery, shakers, etc. They have erected a plant of one thousand (1,000) horse power National water tube boilers, a machine shop, and have equipped the colliery in every respect to prepare the coal up to the regular anthracite standard. They have added a thirteen (13) ton electric locomotive to their inside haulage, regraded the gangways, and are now sinking a shaft upon the property 12x22 to be used as a second opening and an air shaft, and erecting a sixteen (16) foot fan thereon.

#### DELAWARE AND HUDSON COMPANY

# Langeliffe Colliery

No. 1 slope in the No. 2 Checker drift has been extended 500 feet. New road driven at the head of No. 1 plane in Red Ash vein for a distance of 650 through caved area of Avoca Coal Company.

New 10 foot fan erected to ventilate No. 2 Checker drift.

# Seventh Anthracite District

LUZERNE COUNTY

Wilkes-Barre, Pa., February 20, 1904.

Hon. James E. Roderick, Chief of Department of Mines:

Sir: I have the honor to transmit herewith the report of the Seventh Anthracite District for the year ending December 31, 1903.

Mr. E. E. Reynolds, my predecessor in office, resigned at the close of the year to become general manager of the International Coal and Coke Company of British Columbia. I was appointed to succeed him and assumed the duties of the office on January 4, 1904. It has therefore fallen to my lot to compile this report. The report contains the tables, statistics, etc., as required by law.

Respectfully submitted,

JAMES MARTIN, Inspector.

# Seventh Anthracite District, 1903 SUMMARY OF STATISTICS

Number of mines in district,	36
Number of mines operation,	36
Number of tons of coal produced,	4,926,474
Number of tons shipped to market,	4,385,681
Number of tons sold at mines to local trade,	224,174
Number of tons consumed at mines in generating steam	
and heat,	316,619
Number of persons employed inside the mines,	8,451
Number of persons employed outside,	3,619
Number of fatal accidents inside the mines,	34
Number of tons produced for each fatal accident inside,	144,896
Number of persons employed per fatal accident inside,	249
Number of fatal accidents outside,	5
Number of persons employed per fatal accident outside,	724
Number of wives made widows by fatal accidents,	25
Number of children orphaned by fatal accidents,	41
Number of non-fatal accidents inside of mines,	104
Number of persons employed per non-fatal accident in	
side,	81
Number of non-fatal accidents outside,	20
Number of persons employed per non-fatal accident out-	
side,	181
Number of steam locomotives used inside,	2
Number of compressed air locomotives used inside,	2
Number of electric motors used inside,	4
Number of fans used for ventilation,	53
Number of gaseous mines in operation,	31
Number of non-gaseous mines in operation,	5
Number of new mines opened	2

# TABLE A.—Seventh Anthracite District, 1903

## PRODUCTION OF COAL

Names of Companies	Tons
Lehigh and Wilkes-Barre Coal Company,	1,700,273
Susquehanna Coal Company,	1,277,402
Delaware, Lackawanna and Western Railroad Company,	496,625
Lehigh Valley Coal Company,	592,841
Delaware and Hudson Company,	182,036
Alden Coal Company,	289,265
Warrior Run Coal Company,	201,215
Red Ash Coal Company,	152,777
Pittston Coal and Mining Company,	34,040
Total,	4,926,474
Production by Counties	
Luzerne,	4,926,474

TABLE B.—Seventh Anthracite District, 1903

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Number of employes per non-fatal accident	25 05 05 05 05 05 05 05 05 05 05 05 05 05
Number of employes per fatal accident	2022 2022 2452 2455 255 270 249
Tetal number of employ	3,434 3,755 1,256 1,340 658 473 526 219 12,070
Number of employes ou	987 1,150 326 355 355 131 143 256 87 87 87
Mumber of employes in	74.29 74.29 74.29 75
Tons of coal produced	47,311 31,039 42,346 60,679 50,364 76,384 76,388
Tons of coal produced fatal accident inside	154,570 159,677 124,156 145,210 152,777 144,896
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Names of Companies	Lehigh and Wilkes-Barre Coal Co., Suguebanna Coal Co., Co., Co., Co., Chipith Valley Coal Co., Delaware and Hudson Co., Alden Coal Co., Alden Coal Co., Rarior Run Coal Co., Rarior Run Coal Co., Pityston Coal and Mining Co., Pityston Coal and Mining Co., Totals and averages for district.

TABLE C.—Seventh Anthracite District, 1903 Classification of Fatal Accidents

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TABLE D.—Seventh Anthracite District, 1903 Classification of Non-Fatal Accidents

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Occupations of Persons Killed or Fatally Injured Inside, and Outside the Mines TABLE E.—Seventh Anthracite District, 1903

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TABLE F.—Seventh Anthracite District, 1903 Occupations of Persons Injured Inside and Outside the Mines

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	Fire bosses and assistants	
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## TABLE G.-Seventh Anthracite District, 1908

Nationality of Persons Killed or Fatally Injured Inside and Outside the Mines

	American	English	Welsh	Irish	German	Polish	Slavonian	Lithuanian	Austrian	Russian	Swedish	Tyrolian	Totals
January,			1		1	1			1		1		6
February,	1												1
March,				1								1	4
April,								4					1
May,		1											3
June,	2									J			10
July,		1	1	1		- 11							b
August,													0
September, October,													ú
													1
November,													1
December,													
Totals,	5	2	5	4	4.	12	1	2	1	1	1	1	39

TABLE H.—Seventh Anthracite District, 1993

Nationality of Persons Injured Inside and Outside the Mines

	American	English	Welsh	Irish	German	Polish	Italian	Slavenian	Lithuarian	Swedish	Danish	Totals
January, Tebruary, March April, May, Joune,	1 1 3 3 3 2 4 2 1 3 1 1	2 2 1 1	1 2 2	1 1 1	1 1 3	5 6 5 4 2 2 3 6 6 7 2 2 3 4	1	1 1 1 1	3 1 1 1 1 1 1	1	1	1: 1: 1: 1: 1: 1: 1: 1: 1: 1: 1: 1: 1: 1
Totals,	25	7	10	5	7	53	1	6	8	1	1	12

TABLE I.—Seventh Anthracite District, 1903

Operators and mines, kind of openings, type and size of fans, size of furnaces, volume of air produced by fan or furnace per minute, number of splits of air currents, number of persons employed inside, and quantity of air produced for each employe per nature

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stunin was bash sides ), a local fellus in ine gaisend	259,126 401,540 355,920
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Power used	Steam Steam Steam Steam Steam Steam Steam Steam
แก่ ใบ อุเกริ่ม	Guibal Guibal Guibal Guibal Guibal Guibal Guibal Guibal Guibal
sononi ni-boqolevob eguag reta'll	E
Number of revolutions per minute	*유수숙점 급 급 급 명 급 급
Dept ni sebald to diago	2 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8
best ni sebsld to dibi'	3-11-11-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1
Diameter of fan in feet	#4.8.900 P P P P P 4
Method of ventilation	Pan Fan Fan Fan Fan Fan Fan
Gaseous or non-gascous	Gaseous, Gaseous, Gaseous, Gaseous, Gaseous, Gaseous, Gaseous, Gaseous,
Rind of opening	Shope and shaft. Shope and shaft. Shope and shaft. Shope and shaft. Shaft
Names of Operative and	Lehigh and Wilkes-Barre Coal Co. Coal Co. Coal Co. Coal Co. Coal Co. Coal Co. Coal Co. Coal Co. Coal Co. Coal Co. Coal Co. Coal Co. Coal Coal Coal Coal Coal Coal Coal Coal Coal

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Sugar Notch No. 5, No. fan.	fan.	Maxwell No. 26, No. 2 fan. Maxwell No. 29, No. 3 fan. Lexwell No. 2, No. 4 fan.	ý		 >.'\'.	1111	1.545 + 5X			= : 22			. Towers Lattewarma and Western R. R. Co.	/ :::	E. P.		-					The sales of		From or or or Hud in C. Salvi, Jan.
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TABLE I-Continued.

Average number of cubic feet per minute provided for each person	3625	336	410	248	90.8
Number of persons employed inside	8 313 313	230	127	143	132
Number of cubic feet per minute passing out at outlet	72,000 91,600 157,210	115,000	31,700	65,520	125,000
Total quantity of air per minute circulating in all the splits in cubic feet	45,000 57,550 135,170	110,000	52,040	35,450	67,000
Number of cubic feet of air per finite at init gring the mine at init	45,000 57,550 135,170	110,000	34,600	61,820	110,000
Number of splits of air currents	4021	in II	1.2	c)	67
Pomer used	Steam, Steam,	Steam,	Steam,	Steam,	Steam,
nsl to smsZ	Guibal, Guibal,	Guibal,	Vulean Iron	Vulcan Iron Works.	Gurbal,
Water gauge developedin inches	, HHH 6161H	1.5	편.	1.6	63
Number of revolutions per minute	70 70 68	7.2	99	0.7	93
Depth of blades in feet	10 to 0	ro.	3-0	3-9	9-6
Tridth of blades in feet	~ m m ~	9-9	70	rů	4-6
Diameter of fan in feet	252	20		10	17
Method of ventilation	Fan Fan,	Fan,	Fan,	Fan,	Fan,
Gaseous or non-gaseous	Non-gas. Gascous. Gascous,	Gaseous,	Non-gas.	Non-gas.	Non-gas.
Buinedo to baiN	Shaft, Shaft, Shalt,	Slope,	Slope,	Slope & tunnel,	Shaft
Names of Operators and Mines	Alden, Coal Co.	Warrior Run,	Red Ash Coal Co. Red Ash No. 1,	Red Ash No. 2,	Pittston Coal and Mining Co. Hadleigh.

TABLE 1.—Seventh Anthracite District, 1903 Operators, Location of Collieries, Mailroads, Etc.

Natures of Operators and Col- lieries	County	Name of General Superintendent	17. O. Address	Same of Supermendent	P. O. Address	Railread to Mine
Ledukh & Wilkes-Parre Corl Co. Hadientark N. Z. Starten No. T. Starten No. T. Steate Noch Ne. S. Maxwe I No. 20. Letter Wash IV. 20.	Luzerne, Luzerne, Luzerne, Luzerne, Luzerne,	C. P. Huber, C. F. Huber, C. F. Huber, C. F. Huber, C. P. Huber, C. P. Huber,		Wilkess-Parre, M. E. Mergens, inside Wilkess-farre, all, E. Mergens, inside Wilkess-farre, all, E. Herring, Wilkess-farre, acts/de-supt. Wilkess-farre, Wilkess-farre, Wilkess-farre, with the st	Wilkess-Barre, Wilkess-Barre, Wilkess-Barre, Wilkess-Barre, Wilkess-Barre, Wilkess-Barre,	######################################
Susquebeans coal Co.	Luzerne, Luzerne, Luzerne,	Pobert A. Quin, Rebort A. Quin, Rebort A. Quin, Rebort A. Quin,	Willes-Barre, Wilkes-tarre, Wilkes-Barre,	Spares II, Roblicaker, Francis II, Roblesser, Pragis II, Robibleser,		Pennsylvania Pere ylvania Pere ylvania
belawren, Lactare und and Metern R. E. Co. Modin le.	Luzerne, Luzerne,	R. A. Phillip R. A. Phillip	Merantan.			D. L. and W.
Definite Valley Coul Co.	Luzenne	S. D. Warriner,	Wilkes-Bare,	F. I. Zorbey, F. E. Zorbey,		Lehich Valley
18-beware and Hadson Co.	Luz-rne,	C. C. Bake,		E d Pettebone,		Peter and Hedson
Alceh,	Luzerne, .	K. M. Soutth,	Ablen Station	actives Turner,	:	C. R. 1t. of N. J.
Warrior Run, comment Co.	Luzerne,	Thomas R. Jones,	Wilkes-Barre,	Themas R. Jones,	Post Y,	
Red Ash.	Luzerne, .	Edward Smith	Wilkes-Rarre,	Paward Smith,		C. R. R. of N. J.
Falleigh.	Luzerne, .	O'Bayle and Fey	Pittst n	Luzerne, . O'Tayle and Fey., Pittst n Charles Walker,	Sugar Noteh,	C. R. R. of N. J.

Number of tons of coal mined in each colliery, number of days worked, number of persons employed, number killed and injured. TABLE 2.—Seventh Anthracite District, 1903

ionses and mules	Zumber of l	76 119 90 68 78	431	port	432	148	101	182	431
elimenth to shinner	Number of	17,400 77,300 10,597 10,113 42,375	157,785		157,785	62, 334	8,200	76, 186	146,720
pasn tabwood lo sgay	Unmber of	7,584 9,904 4,756 9,455 11,619	43,318		42,318	13. \$35	13,038	7.317	34,190
non fatal accidents	Number of	4.티≪하다	66		38	13	ಬ	16	8
stusbioog Iste	1 lo tedanuk	01012/0100	=		11	:	i e	1.5	2
safojdua	Number of e	877 F 88	1.397	50	3, 434	1,001	1,115	1 306	00,110
lays worked	Number of	* 1987 775	213	121			601	23)	30
snot ni fsos to noit	Total produc	306,677 441,977 369,296 421,862	1, (27, 972	64,321	1.7(0,273	1 11111	798,031	457,598	1.277.402
leed of blos snot	lo redutti bus ebsut	.83, F6 4, 851 8, 985 8, 485 8, 485	110,656	,	119,656	18,835	9.99	1,508	23, 375
msels tol besti suol seltelllee 11	t to redmink s thed bine					1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	40,986	63,983	178.678
heqqida lang to ano ealwredto	to tedimin to list yd	260,231 3.1,453 171,1-7 15,069 15,044	1,516,2.6	64,821	1,580,617	349,116	554.046	372,107	1,075,349
County	-	Luzerne, Luzerne, Luzerne, Luzerne, Luzerne,	ı	Luzerne		Luzerne, Luzerne, Luzerne,	Luzerne,	Luzerne,	
Names of Operators and Collieries		Lehigh and Wilkes-Barra Coal Co. Hollenback. South Wilkes-Barre. Stanton. Sugar Notch. Maxwell,		Jersey Washery,	Totals,	Susquebanna Coal Co. Shaft No. 2, Colliery No. 5, Shaft No. 4, Colliery No. 5, Shaft No. 5, Colliery No. 5, Slope No. 4, Colliery No. 5, Slope No. 4, Colliery No. 5,	Shaft No. 4, Colliery No. 6, State Slope No. 6, Colliery No. 6, Slope No. 6, Colliery No. 6, C	Tunnel No. 6. Colliery No. 6. South shaft No. 1. Colliery No. 7. North shaft No. 1. Colliery No. 7.	Totals,

\*Tetals in this column are averages.

476, v67

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316,619

Totals, 1,5%,6%

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_		00	i	eri i							1,365		
9,686	41,375	11.16	×2, 900 16, 226	97.226	9,550	11,579	2,500	1,250	1,775	2,016	476,867		7.2.1.1.2.2.1.1.2.1.1.2.2.2.2.2.2.2.2.2.
9, 554	2,300	11,851	7,107 8,811	15,918	4,136	8,725	6.748	1.7%	2,549	1.304	129, 992		1 설립트립표기전이다 무료보건됩위기조물
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nd Western R. R. Co.		Totals,	Lohigh Valley Coal Co. Dorrance. Franklia,	Totals,	Delaware and Hudson Co. Conyngham shaft No. 1. Conyagham shaft No. 2,	Alden shaft No. 1, Alden Coal Co. 1	Warstor Rui.	Red Ash No. 1,   Red Ash Coal Co.   Red Ash No. 2,	Totals,	Pirist on Coal and Mining Co. Haelleigh,	Grand t-tals,	she heled in Red Ash No. 2. "Totals in this column are averages.	Lebigh and Wilkes-Barre Coal Co., Susquehanna Coal Co., Lebiaga Valley Coal Co., Lebiaga Valley Coal Co., Lebiaga Valley Coal Co., Marror Run Coal Co., Warror Run Coal Co., Warror Run Coal Co., Perfession Coal and Milliam Coal Co., Perfession Coal and Milliam Co., Co., Perfession Coal and Milliam Co., Co., Perfession Coal and Milliam Co., Perfession Coal and Milliam Co., Perfession Coal and Milliam Co., Co., Co., Co., Co., Co., Co., Co.,

TABLE 2-Continued

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		Number of air compressors		00	1	0.0	60	00	64	00	-
		Number of electric dynamos						:	:	1:	C4
	ace	Quantity delivered to surf per minute-gallons	800 1,600 2,200	5,550		5,550	2,085	910	1,580	4,575	423
	əji	Capacity in gallons per minu	\$00 648 1,848 3,672	9,338		9,338	6,400	3,800	3,700	13,900	633
	Suj.	Number of pumps deliver	~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~	11		111	-	63	ıc	15	
		Total horse power	2, 5542 1, 508 1, 511 1, 511	17,069	332	17,401	4,200	3,200	3,600	11,000	2,896
	all	Notes of steam engines of	양선축문학	12	10	12	883	16	62	19	50
	ves	Sleetric 5						:		1	4,
	Locomotives	τίΛ		-		-		63	=1	6.0	
	- Fo	mears	e e e e e	寸	-	10	1	4	44	15	-
		reword seron labor	2, 000 1, 640 2, 500 2, 500 2, 650	10,669	180	10,849	5,044	2,712	4,305	12,061	1,500
	Si .	Horse power	2,000 1,500 1,500 1,500 1,969	8,219	09	8,279	4,484	2,500	3,780	10,764	1,500
	Number of Boilers	tsluduT	8 p p p p p p p p p p p p p p p p p p p	51	C1	44	SH SH	10	16	44	11
	umber	Horse power	1.620 690	2,450	120.	2,570	260	212	525	1,297	
	Z -	[galabull?]	4.8 5	55	65	58	16	9	15.	37	
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		County	Luzerne, Luzerne, Luzerne, Luzerne, Luzerne,		Luzerne.		Luzerne, Luzerne, Luzerne, Luzerne, Luzerne,	Luzerne, Luzerne,	Luzerne, Luzerne,		Luzerne, Luzerne,
The state of the s		Names of Operators and Collieries,	Hollenback. South Wilkes-Barre Coal Co. South Wilkes-Envre, Estanta, Slanta, Maxwell.			Totals,	Shaft No. 2. C'Illery No. 5. Shaft No. 4. Colliery No. 5. Shaft No. 5. Colliery No. 5. Shaft No. 5. Colliery No. 5. Slope No. 1. Colliery No. 5. Tunnel No. 4. Colliery No. 5.		7, 0. 7,	Totals,	Delaware, Lackawanna and Western R. R. Co. Co. Hiss. The Espy tunnel,

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										434
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\$75	2,375	1,450	2,950	750	153	900			310	27,081
1-	4	6.0	10	0	4	9			ec 1	143
					720	6/1/2	405	1,655	186	6,642
					18	11	6.7	62	9	155
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Luzerne, Luzerne,		Luzerne, Luzerne,		Luzerne, Luzerne,	Luzerne, Luzerne,	Luzerne,	Luzerne, Luzerne,		Luzerne,	
Auchincloss shaft No. 1, Auchincloss shaft No. 2,	Totals,	Lehigh Valley Coal Co. Derrance, Franklan,	Totals,	Conyughents that No. 1,	Alden shutt No. 1. Alden shutt No. 2.	Warrior Run,	Red Ash No. 1. Red Ash No. 1. Red Ash No. 2.	Totals,	Pittsten Coal and Mining Co. Healbeigh,	Grand totals,

TABLE 2- Recapitulation

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2,570		1,855	6,042
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			:
Luzerne,	Luzerne, Luzerne,	Luzerne, Luzerne, Luzerne, Luzerne,	
e Coa	Pel wate, Latkawagila and western in the Co. Lebis Valley Coal Co. Pelaware 2007, Hudson Co.	Aldem Cat Co., Warranger Ran Coll Co., Rankston Cast Co., Pittston Cost and Mining Co.,	Totals,
Lehigh an Susque han	Co Lehigh V.	Molen Co Warrent i Red Ash Pittston o	Tota

Number of Each Class of Employes at Each Colliery TABLE 3.—Seventh Anthracite District, 1903

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	Persons	Shite pickers (hoys)	86876	77	2008	88 55	929	95	116
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	Occupations	Blacksmiths and carpenters	101-0100	677	10	18 8 8	26	00 TH	61
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		County	Luzerne, Luzerne, Luzerne, Luzerne, Luzerne,	Luzerne,		Luzerne, Luzerne, Luzerne,		Luzerne, Luzerne,	
		Names of Operators and Collieries	Ledigh and Wilkes-Barre Coal Co. Hollenback. South Wilkes-Barre. Stanton. Suwar Netch.	Jersey washery,	Totals,	Susquehanna Coal Co. Colliery No. 5. Colliery No. 6. Colliery No. 7.	Totals,	Delaware, Lackawanna and Western R. Co. Bliss. Auchineloss.	Totals,

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Lehigh Valley Cral C. Dorrance, Pranklin,		Conyngham,	Alben Cal Co.	Warrier Run Ceal Co	Red Ash No. 1. Red Ash No. 2	,	Putst m Cal and Marine Holleigh,	_
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TABLE 3- Recapitulation

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TABLE 3-Continued

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Number of Days Worked Each Month in	ysngny	18.9 18.5 17.4 20.1	19.3	20.6 21.9 21.9	21.5	19.8	20.	18.8	20	18.4
ted Eac	July	21.5 19.1 18.3 21.9 21.6	20.5	21.0 19.8 22.4	21.1	21.1	20.1	20.0	21.2	19.1
ys Worl	əunr	92 92 92 92 92 92 92 92 92 92 92 92 92 9	20.5	18.5 17.9 19.0	18.5	21.1 19.8	20.5	20.3	24.8	18.2
of Day	May	13.7 17.3 11.6 20.3 18.8	17.5	19 6 19.6 20.5	19.9	20.5	F. 5	17.5	18.4	15.8
Number	lingA	19.3 17.4 20.4 21.2	15.8	21.7 22.8 24.0	22.8	12.4	16.2	18.5	20	16.2
	Матећ	21.8 21.8 21.8 21.8 5.1.8	19.1	20.1 20.1 22.6	21.6	1.6	11.1	21.3	22.8	18.5
	February	19.4 23.0 4.0 20.5 20.4	17.5	20.7 17.3 22.1	20	18.9	18.8	17.8	20	16.6
	January	22.2 22.3 23.0 23.0	23.7	23.1 20.7 22.9	22.2	22.2 12.6	17.4	21.9	23.3	20
			:	: : :					:	
	County	Luzerne, Luzerne, Luzerne, Luzerne, Luzerne,		Luzerne, Luzerne, Luzerne,		Luzerne, Luzerne,		Luzerne, Luzerne,		Luzerne,
	Names of Operators and Collieries	Echigh and Wilkes-Barre Coal Co. Follenback. South Wilkes-Barre, Stant n. Sugar Notch, Maxweil,	Averages,	Susquehanna Coal Co. Colliery No. 5, Colliery No. 6,	Averages,	Delaware, Lackawanna and Western R. R. Co. Bliss. Auchincloss,	Averages,	Dorrance, Lehigh Valley Coal Co. Franklin,	Averages,	Delaware and Hudson Co.

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13.1	17.1			11.	16.6
16.8	16.2			14.4	15.3
17.7 16.8 13.1	18	13.5	13.5	11.3	19.3 17.1 16.9 17.6 17.6 17.5 18 18.3 10.6 13 15.4 15.8 1909
16.7	15.3	18.4	16.2 18.4	15	17.0
13.4 16.6 . 16.7	16.2 15.3	16.2	19.6 20.1 18.5 16.2 18.4		17.6
13.4	18	18.2	20.1 15.5		17.6
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19	16.3	19.6	22.6 19.6	6 2	17.1
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Luzerne,	Luzerne,	Luzerne, Luzerne,		Luzerne,	
	Warrier Run, Warrier Run, Luzerne, IS 16.3 18.9 18 16.2 15.3 18 16.2 17.1 14.4	Red Ash No. 1. Edd Ash Coal Co. Fuzerne, Red Ash No. 2. Luzerne,	Average's,	Hadleigh, Luzern Cool and Mining Co. Luzerne,	Wedakes,

TABLE 3- Recapitulation

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Luzerne,         23.7         17.5           Luzerne,         22.2         20.6           Luzerne,         17.4         18.8           Luzerne,         23.3         20.6           Luzerne,         24.4         16.6           Luzerne,         18.6         11.4           Luzerne,         18.6         11.6           Luzerne,         18.6         11.6	Luzerne, 2.6 B: 6 Luzerne, 5.2 6 17.1	
Luzerne,         23.7         17.5           Luzerne,         22.2         20.6           Luzerne,         17.4         18.8           Luzerne,         23.3         20.6           Luzerne,         24.4         16.6           Luzerne,         18.6         11.4           Luzerne,         18.6         11.6           Luzerne,         18.6         11.6	Luzerne, 25.6 6 18.6 19.3 17.1	THE RESERVE THE PROPERTY OF TH
Luzerne,         23.7         17.5           Luzerne,         22.2         20.6           Luzerne,         17.4         18.8           Luzerne,         23.3         20.6           Luzerne,         24.4         16.6           Luzerne,         18.6         11.4           Luzerne,         18.6         11.6           Luzerne,         18.6         11.6	Luzerne, 25.6 6 18.6 19.3 17.1	
Luzerne,         23.7         17.5           Luzerne,         22.2         20.6           Luzerne,         17.4         18.8           Luzerne,         23.3         20.6           Luzerne,         24.4         16.6           Luzerne,         18.6         11.4           Luzerne,         18.6         11.6           Luzerne,         18.6         11.6	Luzerne, 25.6 6 18.6 19.3 17.1	
Luzerne, 25,7 17,5 Luzerne, 25,8 20,8 20,8 20,8 20,8 20,8 20,8 20,8 20	Luzerne, 25.6 6 18.6 19.3 17.1	

TABLE 4.—Seventh Anthracite District, 1903 Fatal Accidents in and about the Mines

										1 2000 80	_
	Nature and Cause of Accident in Brief	Run over by leaded trip. Fenally miured by premature blast. Fenally miured by fall of top coal. Fenally burned by asa. Empty, over teen away, on breaker plane,	Instantly killed by falling into the ele-	vators. Instantly killed by exploding cartridge Fatally burned by explosion of gas. Instantly killed by a premature blast. Instantly killed by a fall of roof. Instantly killed by a fall of coal from	the rib. Fatally burned by explosion of a keg of	Instantly killed by falling down slope. Figure burned and bruised by an explo-	Should be gas. Chain on new slope broke and empty car	Killed by gas, which he lit while trying	Instantly killed by a fall of bone. Squeezed between car and rib by car	Jumping track.  Run over by mine car.  [Burned by an explosion of gas, while they were repairing brattice that had	Duried by an explosion of gas as he was shoveling coal at the face.
72	County	Luzerne, Luzerne, Luzerne, Luzerne, Luzerne,	Luzerne, Luzerne,	Luzerne, Luzerne, Luzerne, Luzerne, Luzerne,	Luzerne,	Luzerne, Luzerne,	Luzerne,	Luzerne,	Luzerne, Luzerne,	Luzerne, Luzerne, Luzerne,	Luzerne,
Fatal Accidents in and about the Mines	Name of Colliery	Maxwell, Slope No. 6, Matrior Run, Bliss, Franklin,	Sugar Notch, Red Ash No. 2	Auchineless, Warrior Run, Maxwell, Franklin	Warrior Run	Slope No 6,	Bliss,	No 1 shaft,	No 1 shaft,	Breaker No. 6, Warrior Run,	Warri r Run, Luzerne,
ng	Number of orphans	H :N :00					=	:	21	10 का <del>बा</del>	
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ent	927	920 77 78 20 20 20 20 20 20 20 20 20 20 20 20 20	25.5	88418	t- 21	22.22	ŝ	<u>c1</u>	55	63 40	35
Fatal Accid	погарайоп	Doorman, Miner, Miner, Mason, Footman,	Miner,	Miner, Miner, Laborer, Laborer,	Laborer,	Footman,	Lahorer,	Fire loss,	Miner,	Laborer,	
	Valionality	German, German, Polish, Welsh, Austrian,	Swedish,	Irish, American, Polish, Tyrollan, Polish,	Lithuamian,	English,	Russian,	Welsh,	Pelish,	Slavonian, Irish, American,	Polish, Laborer,
	Name of Person	John Brown,	Christian Christiansen,	Patrick Kealey, Frank Minich, Michael Slater, Joseph Titus, Jacob Siskie,	Anthony Bruges,	William Wright,	Andrew Petronick	William D. Williams,	Joseph Kootz, John Hayes,	Samuel Figulia,	Frank Baker,
		220022	72	S \$ 23 T 33	10	88	6.3	-21	72	777	67
	l)ate of accident	Jan.	Feb.	March April	May		June				

	Norm Covers, Polish, C. Thorer, 24 M. 1 1 Maxwell, Lazerne, Instantly killed by a fall of roof.  Data to Da	Instantly killed by a fail or root. While shoveling celm, he was caught by	a rush and jumped into the conveyor	Instantly killed; caught between loaded	car and pib. Fatally, injured by a fall of rock while	Welsh, Siner, 50 M. 1 3 Red Ash No. 2, Lazerne, historick shiled by a fail of top rock.	ten down shall from the fillingal landing 1 to the Ealtimore.	I Instantly kelled by a fall of top rock.	1984	over him. Instructive billion has a full of word words	Instantly killed by a tall a real work.	Farally injured by a tall of reof pock.	Evan D. R. P. E., Vielsh, Co. n.thert, 19 M. 1 2 Stanton, Luzzene, Instantify killed by an explosion of gas-	
	Luzerne,	Luzerne,		Luzerne,	Luzerne,	Luzerne,	Luzerne,	Luzerne, .	Luzerne,	Inzorna	Luzerne,	Luzerne,	Luzerne,	
o W. Complete	Maxwell,	Hadle ich,		Driver, 17 S Hollenback, Luzerne,	Stanton, Luzerne,	Red Ash No. 2,	Lauranne,	Hellenbarck,	Erraker No. 7	So chaff No 1	No. Short No. C.:	So, Willias-Barre,	Stanton,	
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D. Hab	Polish,	Irish,		Lithuanian,	English, Co. miner, H M. 1	Welsh,	1 011511,	Welsh,	Irish,	Polish	German,	P. lish,	\. (elsh,	
Lobra D. O. cotter	Marin Covack,	Thomas McPonald,		3 Anthony Baltriehus, Lithuanian,	3 ; William Kitchen,	William L. Jones,	Med 2 miles of med mil		Anthony Rozleski,	William Boxeis	Aslem Yeallite,	Anthony Perski,	Evan D. R. b. rts,	
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Tuna	Tuly	c a i						Aug.		Sent		Oct.	Nov.	

TABLE 5.—Seventh Anthracite District, 1903 Non-Fatal Accidents in and about the Mines

Nature and Cause of Accident in Brief	Burned by gas, which he ignited while barring down coal. Burned by gas, which Williams Ignited. Injured by a piece of middle rock failing	upon him.  Burned on face and hands by gas, Both legs broken by a fall of rock, Leg broken by a fall of rock Leg broken by a fall of rock Finger cut off by mule jumping upon it. Two wils broken by a piece of coal falling	Capell Interpretable and the state of the st	Burned by gas.  Surned by gas.  Lot smashed by a slate chute gate falls, for smashed by a slate chute gate falls.  Fing upon it.  Side bruised and head cut by flying coal	Back and legs bruised by fall of top rock. Burned on hands and face by gas. Collar bone broken; caught between car and collar. Hip fractured by fall of roof.	Alike proper, cassar, especial property of the state of t
County	Luzerne, . Luzerne, . Luzerne, .		Luzerne, . Luzerne, .	Luzerne, . Luzerne, . Luzerne, . Luzerne, .		Luzerne, Luzerne, Luzerne, Luzerne,
Name of Colliery	South Wilkes-Barre, South Wilkes-Barre, Conynghan,	Alden shaft, No. 2, Waswell, Maxwell, Haft No. 1, Adatt n, Dottaned	Maxwell, Ne. 6, Glen Lyon, Bliss,	Sugar Notch, Sugar Notch, Breaker No. 5, North shaft,	S-uth shaft, Maxwell, Slope No. 4, North shaft, No. 1,	Stripe No. 1, Pilse, South shaft No. 1, Shaft No. 2, Bliss,
Married or single	No.	EENNEE	N N	K Kiviv	MAN NEW	E ww ZZ
92A	12 % 12	332286	8 % 8	8 388		35 16 16 45
noitaquosO	Miner, Laborer, Laborer,	: ಪ	Miner,	Miner, Laborer, Laborer, Miner,	Miner, Moor boy, Miner,	Laborer, 40 Laborer, 35 Door boy, 16 Laborer, 53 Miner, 45
Nationality	Welsh,		Lithuanian,. Italian, Et glish	Lithuanian Lithuanian Polish	Polish, Lithuchian, American, Polish,	Polish, Polish, Polish, Lithuanian,
Name of Person	Ellis Williams, James Davis,	Harry Hansen Frank Buteuf Thomas Burke Peter Krofsich Thomas Feine Martin Balick	Matthew Backelonis, Lewis L'ardi, Thomas Chamberlain, .	Deminick Conniff, Michael Taylor, John Ocosta, Starley Marcofski,		John Kulbotelski, John Gumlefski, Martin Blockus, Andrew Yuskewicz, Joe Kellar,
Juste of accident	Jan.	2 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	8 616	28 28 29 29 29 29	9 14 14 18	26 27 28 28 March 2

Chest bone broken by explosion of cart-	rudge. Injured his back and head by a fall. Leg broken by a fall of reck. Arm bessen by tall at notion of breaker. Collar bon- broken; squeezen between car	and loot. Two ribs broken; struck by car at foot	Arm, leg and skull breken by fall of roof	Eyes injured by lime fulling into them. Leg broken by fall of home. Eagly broaded about be by full of rock. In this basication by a tall of rock. Arm tractured, run over by a boaded car.	Log broken by a fall of rook. Log broken by pero falling upon it, long noten by pero falling upon it, language internally by car falling upon	him. Finer cut off by breaker engine, Euroed by an expect of gats. Finer cut off; caucht b twen car and	door,	car. Ann broken; emshad by er wd of men at tent of sleet	Brussed by being run over by cars.  Nose beden: keeked by mide a hipmed by the lant at the laditimere some catching the case or warst, they	I worp constraint in start.  Figured by an explicitly at least the Web.  Shall instituted by full of start.  For broken by prop factors against it.  Four critished bytween cars and feet of	slope Finger breken; caught between stretcher,	hok and coupling plate, I fland smashed by showes at head of	shaft. Body bruissel; caught between our and	The The broken and back brunsed; caught	Boay bruised; fell off mule, . Face and lamps burned and braised by	Annual and the second of the second of sold fall-	ling upon both Pringer cut off by car running over it.
Luzerne, .	Luzerne, . Luzerne, . Luzerne, . Luzerne, .	Luzerne, .	Luzerne, .	Luzerne, Luzerne, Luzerne, Luzerne,	Luzerne, . Luzerne, . Luzerne, .	Luzerne, Luzerne,	Luzerne, .	Luzerne, .	Luzerne, Luzerne, Luzerne, Luzerne,	Luzerne, Luzerae, Luzerae, Luzerae,	Luzerne, .	Luz rne,	Luz ane,	Luzerne, .	Luzerne, .	laizerne, .	Luzerne, .
Auchineloss,	Bliss, Slope No. 4, Nanticoke, Bl.ss, Maxwell,	Maxwell,	Franklin,	Shaft No. 2, Pranklin, Franklin, Franklin, Nuchardes No. 1, N. shaft No. 1, Nanti-	coler, Wilke s-Barre, Red Ash No. 2. Breaker No. 7, Nanticoke Auchincless,	Stanton,	No. 1 shaft, Nanticoke,	Conyngham,	No. I shaft, Na stirode. Warrior Run, Bliss,	Warrior Run, Frank in, No. 4 Slepe, Nantierke, No. 6 be aber, Glen	Lyen. Hollenback,	South Wilkes-Barre,	11 ss.	Maxwell,	Tr aker No. 6, Glen Lyon Bless,	Slepe No. 6, Glen Lyon,	Breaker No. 7, Nantie de
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Laborer,	Carpenter,	Door boy,	Laborer,	Company laborer, Miner. Company miner, Miner. Deep boy,	Miner, company laborer, Loboter,	Engineer, Miner, Miner,	Runner,	Door boy,	Miner, Duor Loy, Miner, Laborrer,	Miner, Deer le v, Cempany miner Runner,	Helper,	Carpenter,	Miner,	Spragger,	Lab ster	Min r.	Runner,
Polish,	German, Slavonian, American,	German,	Polish,	American, Polish, Welsh, Engl.sh,	Polish, Wedsh, Polish,	Anordan,	Polish,	Ir.sh,	Pel sh American, slavob an, Lithuanian,	Lithuannan	The ricella.	Au. ricain,	Et ellste	State mian, .	P. P. B.	Pellish,	German,
Binis Vinea,	John Klimesorge, Michael R pichak, N. Rice, Michael Carlin,	Paul Gruskey,	Anthony Grazavage,	Pred, Devis, Jeseph Weiss, Favor L'yeston, Fowm Richards, Foot Clark,	Anthory Stojorites, Rowland Grahiles, Argust Granitzki, St., J. Im W. Richards,	Antheny Berlly, Alb t. I. wmen, John Smith,	Mike Stevinski,	Fred. Pugan,	Valentine Vinkofski, James D. Merris, Andrew Sch ftz, Andrew Gafmski,	William Peskanski, Patrok Zaidan, Themas Panitt, Larry leading.	Reese Phillips,	sam Daniels,	Edwin Bayliss,	John Hammaniski,	Frank Stozak, James Lyn h.	, Milk - Marra,	Hemy Mune fski,
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March					April					May						June	

TABLE 5-Continued.

11										´			
	Nature and Cause of Accident in Bricf	Struck by flying coal from premature	blast. Pelvis fractured by force from gas ex-	plosion.  Ann broken by car jumping track. Collar bone broken by fall of rock.  Arm cut off by a truck running over it.  Leg broken by a fall of coal.	Back injured and 18gs broken by fall of coal.  Leg broken by fall of top rock.  Log broken by being causht between can	and bottom rock.  Two fingers broken; caught between lo-	comotive and cars.  Arm broken by fifting coal from blast. Foot broken: caught by loaded car. Pelvis fractured; squeezed between cars.	Leg broken by collar falling upon him. Ankle broken by prop falling upon him. Leg broken by prop falling upon him. Ankle broken: struck by a nicee of coal	from a blast. Injured about body, arms and legs by	Fundaway car. Fundaway car. Leg broken by a fall of coal. Leg broken by a fall of roka. Arm broken by fixing coal from prema-	ture blast. Left hand smashed by explosion of dyna-	mite cap. Thumb caught between sprag and car	Wheel aid cut our.  Jordan arm broken by fall of roof.  Burned by explosion of gas
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	County	Luzerne,	Luzerne,		Luzerne, Luzerne,			Luzerne, Luzerne, Luzerne,		Luzerne, Luzerne, Luzerne, Luzerne,	Luzerne	Luzerne	Luzerne, Luzerne, Luzerne,
	Name of Colliery	Bliss,	Bliss,	South Wilkes-Barre, Auchincless, Red Ash No. 2. South Wilkes-Barre,	Auchineloss,	Breaker No. 5, Nanticok	Warrier Run, Breaker No. 7, Nanticoke Maxwell,	Alden shaft No. 2, Red Ash No. 2, Alden, No. Shaft, Nandicoke	Franklin,	Maxwell, Warrior Run, Franklin, Stanton.		Franklin,	Maxwell, Slope No. 4, Slope No. 4,
	Married or single	M.	M	ZZZZ	zi vizi	Ω.	ம் ம் ம்	z z z z	Z.	KKKS	υż	M.	Ziviv
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	noitsquooO	Laborer,	Driver,		company miner,	Compan	Miner, Plane footman . Helver,	Company laborer, Laborer, Teamster, Laborer,		Door boy, Miner, Miner, Miner,	Runner,	Runner,	Laborer, Miner, Miner,
	Nationality	English,	American,	Polish, Welsh, American,	Polish,	American,	I olish, Polish,	English. Polish. American. Polish.	American,	Polish, Polish, Polish, Irish,	American,	American,	Polish, Polish, Polish,
	Name of Person	Andrew Herring,	Charles Bartleson,	Frank Saviskie, D. L. Evans, William Lening, Patrick O'Donn II,	John Maleoski, Jacob Rodauski,		Felix Grazinski, Joe Uystaichick. Patrick Lenahan,	Fred. Smith, Mike Siman, Treath Paramski,		John Bubrich, Stanley Podzalik, Joseph Preuner, Patrick McCue,	Patrick Devaney,	Hugh Ginlay,	Andrew Cottolic, John Weiscoble, John Strachniski,
	Date of accident	6	17	25 25 27 27 27 27 27 27 27 27 27 27 27 27 27	20 30 July 9	10	13 8 23	នានានាគ	30	31 Aug. 5	13	123	133
11					J.					₹			

A)m caught between bolt and bolt wheel and leoken.  Skull fractured by fall of rock.  Fraised by Bying coal from premature bins.  Fraised by Bying coal from premature bins.  Fraise binst from from premature bins bins.  Fraise binst from frip of cars.  Fraise factories by fall of bone.  Log broken by tidling from trip of cars.  Hand caught between one fumper and alock and firsters broken.  Log broken; country between males.	Log broken by full of earl, blast, and chest injured by premature blast. Finger cut off between a piece of rock and a prop. Finger cut off is prep rolled on it. Collar bone broken: caught between an empty cut and brottere. Fin states a such between cars. Fractured fill by full between cars. Romitter of wrists; aught between cars. Romitter and bas hou sed by full of boney. Rol tractured by full of boney. Rol tractured by full of coad from roof. Thum cut off by bashed cut.	Highlit and Wo finases nown on by oy- roun to exp.  Foul under the claim hoist treatle and broke his beg.  Let hand amputated; injured by a pre- mature -last.  Les structured -last.  Les structured -last.  Shart fractured by coal from a premature- blast.  Shart fractured by coal from a premature- blast.  Shart fractured; struck by rope on plane Les fractured; caught by a car jumpon track.  And breken by a flying missile from a acts exclosion.  Anno breken by a flying missile from a acts exclosion.  Thurst severely by are flying a car jumpon collar bone broken; squeezed between collar bone broken; squeezed between and doop franted by a fall of rook, flying a function by a fall of rook.  First a monutated by a fall of rook, flow fractured; squeezed between car- and doop franted; squeezed between car- best fractured; squeezed between car- best fractured; squeezed between car- best fractured; squeezed between car- best fractured; squeezed between car-
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Bilse, Franklin, Derrance, Stanton, Derrance, Derrance, Beraker, No. 5, Nanticeke	Ani a No. 1, Bollenharck, Sharft No. 1, Nanti- coske, Hedienbarck, Hedienbarck, Tradleigh, Statt W. Wilex-Barre, Statt W. Wilex-Barre, Statt W. Wilex-Barre, Statt W. Wilex-Barre, Statt W. Wilex-Barre, Statt W. Wilex-Barre, Franklin,	Scorth Wilkess-Barre, E. Scorth Wilkess-Barre, E. Scorth Short No. 1. Nam- Alden shaff No. 2. Alden shaff No. 2. Shaff No. 2. Shaff No. 2. Stanton, Shaff No. 2. Stanton, Shaff No. 3. Stanton, Shaff No. 3. Stanton, Shaff No. 3. Stanton, Nawwell, No. 3. Watevell, No. 4. No. 5.
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State picker,   11     Laborer,   29     Miner,   22     Miner,   23     Priver,   15     Driver,   17     Dr	Miner, 98 Miner, 97 Laborer, 25 Laborer, 26 Miner, 41 Oiler, 99 Miner, 99 Mi	Miner, Miner, Miner, Miner, Miner, Miner, Fire boss, Fire boss, Fire boss, Fire boss, Miner, Mason, Deore boy, Miner, Miner, Miner, Miner,
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10 Deter Sheedock,	Charles Stahl, Joseph Dubbins, Joseph Rentfa, Martin Oshkimas, Eugene Caffrey, J. In Moxills, Mirrogal Liskefski, Herry Jones, Thomas Mee've, John Leeke,	John Denko
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#### Fatal Accidents-Inside

# By Falls of Coal, Slate and Roof

Adam Vishinsky, miner, at the Warrior Run colliery, was working a breast in C vein No. 2 lift, a road breast. Between 4.30 and 5 o'clock he was drilling a hole in the middle bench with a piece of top bench hanging over and it appears that he was through drilling this hole and had the bar loose when a large piece of the top bench fell and struck him. He was able to sit up when first found. He was carried home and a doctor summoned, who found that he had a broken foot, but he was otherwise not considered very seriously hurt. He died suddenly, however, the following day, probably from shock.

Christian Christiansen, miner, in the Sugar Notch colliery, was cutting a hitch in the bottom rock to stand a prop to secure the roof, when a small piece of rock fell upon him killing him instantly.

Joseph Titus, rockman's laborer, was killed at the Franklin colliery in the new tunnel that is being driven in the long slope from the sump seam to the Abbot. The chargeman and Titus were trying the roof after firing a round of holes, when a piece of rock fell and instantly killed Titus.

Jacob Siskie, miner's laborer, at the Dorrance, was in his breast in tunnel lift, Baltimore vein, loading coal alongside of the car, when a piece of coal fell from the rib and caught him against the car, instantly killing him.

Joseph Kootz, miner in No. 1 S. shaft of the Susquehanna Coal Company, was driving a heading in a pitching breast in the Ross seam. He had fired a blast in the face, which left the top bone up. This top bone was about eight inches thick. He went back and began to throw the coal from the face, when the bone fell upon him, killing him instantly.

John B. Ososky, laborer, in the North shaft, No. 6, Susquehanna Coal Company, was in the act of loading a car when a piece of top rock fell upon him, killing him instantly. This man's miner had been warned of the top rock by the fire boss, who had ordered him to take it down or to stand props under it. He put one prop under it and began loading coal, when the accident occurred.

Martin Covack, mucker, at the Maxwell, was working in No. 10 tunnel, West Ross vein. He was on the night shift. While loading a car of rock about eighteen feet from the face, a piece of top rock fell, instantly killing him, and fracturing the leg of John Malcoski, the chargeman.

Frank Yanosefski, laborer, at the South shaft, No. 7, Susquehanna Coal Company, was putting up a set of timbers in the face, of the chamber when a piece of top rock fell upon him, fatally injuring him. The place where the accident occurred, to all appearance, was in a safe condition, but there was a "slip" in the roof, close to the face of the coal, which was not discovered before the rock fell. Yanosefski was taken to the hospital where he died at 9.05 P. M. on the day of the accident.

William Kitchen, company miner, at the Stanton, was propping the rib in the new sump of the Baltimore vein, when a piece of rock fell from the roof and struck him on the back and hip injuring him internally. He was injured on the 3d of July, and died on the following day.

William L. Jones, miner, at Red Ash No. 2, was robbing pillars in No. 2 tunnel, Red Ash vein. He came out to the blacksmith shop at noon to eat his dinner. After dinner he rode in on a trip of cars with the driver. The driver stopped at Mike Stuler's place to leave a car and Jones got out of the car and Stuler and he walked into Jones's place. They stopped several feet away from the face of the workings and Jones went up on top of the gob to roll down a piece of coal, and as soon as he reached the piece of coal, a large piece of top rock fell upon him and killed him instantly.

David J. Lewis, miner, at the Hollenback, was working in a breast in No. 2 plane west. He went back from the face about one hundred forty feet to bar down a piece of top coal. While in the act of barring the coal down it fell upon him, killing him instantly.

William Bowris, miner, in South shaft, No. 1, Susquehanna Coal Company, was in company with Peter Wasolefski, in the act of cutting a pair of timbers on the main road, for the purpose of putting in a set of timbers, when a large piece of top rock fell, killing Bowris instantly and slightly injuring Wasolefski about the feet. From all appearances they had cut the collar nearly through with an axe, and the miner went on the upper side to bar the timber down with a drill, when the said piece of top gave way from a slip in the strata which was not previously discovered. The accident occurred in the Ross vein.

Adam Yodlite, miner, in the North Shaft, No. 6, Susquehanna Coal Company, was on his knees drilling a hole in the bottom bench, when a piece of clod from the top fell on the back of his head. He died in fifteen minutes from the time the accident occurred.

Anthony Berski, miner, in the South Wilkes-Barre, while working in the No. 3 tunnel, East Kidney vein, was injured about his head and back so badly by a fall of top rock that he died on his way to the hospital.

# By Explosions of Gas

Thomas L. James, mason, in the Ross vein shaft of the Bliss colliery was building a wall in chamber No. 29 on No. 2, East lift off No. 3 slope. He was making his way from the chamber to No. 5

slope through old chambers, which he should not have done. While in chamber No. 34 near station 654, he ignited a small quantity of gas with his naked lamp and was burned about the face and hands. He had a safety lamp at the time which he might have used.

Frank Minich, miner, at the Warrior Run colliery, was working in D vein, No. 5 lift, No. 23 breast about 60 feet from the gangway, when an accumulation of gas was set off in some unknown way, either from the breast inside of his working place or from his own. When questioned he said he was preparing to fire a hole and had examined for gas and had found his place clear, when he discovered that the gas had been fired from the breast beyond him and was coming through the heading to him. The bratticemen, J. W. Roberts and Jas. Brislin, corroborated his story by saying that his place was clear, when they were putting in brattice for him, but some gas was in the other breast. Minich was so seriously burned about the hands, face and body that he died about 8 o'clock in the evening, after being taken to the hospital. The accident occurred at 11 P. M.

Isaac Transue, trackman, at the Bliss colliery, with a number of other workmen was burned by an explosion of gas in West Side Ross, No. 2 plane. Doors being left open on the lift was the cause of the accident. He was not thought to be seriously burned but he died on June 6, at the Moses Taylor Hospital at Scranton.

William D. Williams, fireboss, in the North shaft No. 1, colliery No. 7 of the Susquehanna Coal Company, was making his examination in the west side of Cooper seam in No. 3 West gangway. He came from No. 163 place to No. 153 place, and encountered some gas a little distance from the face. He walked down to the second heading leading to No. 144 place and encountered some gas here, which put his light out. He then went down the breast until he thought he was on the gangway in a fresh current of air. Here he struck a match to light his lamp. This caused an explosion and he was burned about the head, face, neck, arms and thigh. The accident was due to his own neglect as he should not have struck a match. The other firebosses seeing that he was not out in time were inside looking for him. He came out alone in the dark and was met on the empty track of the turnout at the foot of the shaft by William X. Jones at 6.45 A. M. The accident occurred about 5.40 A. M.

Edward Morrissey and Nelson Taylor, miners, at the Warrior Run colliery, were fatally burned and Adam Yachula, laborer, was severely burned by an explosion of gas and Chas. Bartleson, driver, had his pelvis bone fractured by being thrown down by the force of the explosion. The explosion occurred in the second opening in C No. 6, West gangway, and was above the gangway road about 120 feet. Morrisey was driving a heading from his place to Taylor's which was

about 15 feet higher than his own, and burst through, knocking some props and brattice down, and while assisting Taylor in repairing the damage, the gas started to fill up in Taylor's place. They were working with a safety lamp but Morrisey's safety lamp was found in the middle of his heading and the two naked lamps at the mouth of the heading near where Adam was drilling a hole. It appears that they were brushing the gas and brought it into contact with the naked lamps in heading. Taylor died on the 25th of June, eight days after the accident, from crysipelas setting in where he was injured on his leg, and Morrisey died on the 29th of June.

Frank Baker, laborer, was fatally burned and Frank Ostrofski, miner, was seriously burned by an explosion of gas at the Warrior Run colliery. The explosion occurred in Ostrofski's breast, C vein, No. 5 gangway about noon. The miner was driving a heading from his place to the next place inside and was in about two yards when he struck a strong feeder of gas. The miner went down the gangway for powder and was returning with a cartridge of powder in one hand and his naked lamp in the other, and while some distance from the face the explosion occurred, burning both men quite severely about the hands, face and body. After the explosion the laborer's cap and safety lamp were found in the heading, his shovel and naked lamp were hanging on the canvas near heading and within two feet of the level of the gas at the heading. They were taken to Mercy Hospital, where Baker died on June 30, eight days after the accident.

Henry Law, miner, at the South Wilkes-Barre shaft, while repairing a set of timbers after firing a shot in his chamber in No. 4 slope. Fourth East Top split, Baltimore vein, ignited a body of gas which had accumulated in the face, burning him seriously on his hands, face and back. He died at his home on October 7, the day after the accident.

Evan D. Roberts, company miner, at the Stanton colliery, went to the old workings to an abandoned breast without a safety lamp, to remove some sheet iron, and ignited a body of gas.

# By Explosions of Powder

Anthony Bruges, laborer, was fatally burned and Wm. Poslanskie, miner, was severely burned by the explosion of a keg of powder at the Warrior Run colliery. Bruges's miner not being out on the day of the accident, he went along with Poslanskie. He took a keg of powder with him which they supposed to be damp. When they reached the heading where Poslanskie had his powder, he asked Bruges to empty some of the powder into his (Poslanskie's) hand. This Bruges did and in some way it became ignited and Poslanskie threw the powder down on the keg, when an explosion occurred

which set off another keg of powder belonging to Poslanskie, with the above result. They were taken to the City Hospital where Bruges died.

## By Cars

John Brown, doorman, in the Maxwell colliery, was working in Southwest Red Ash gangway. He was run over by a trip of cars, which the runner was running, and had both legs crushed. He died at the Mercy Hospital.

Andrew Petronick, laborer, in the Bliss colliery, was killed by being struck by a runaway car on the New slope in the Baltimore vein. Patronick was sent into the crosscut, which was near the face, to stay there while his miner with his other laborer went up the slope to get an empty car. While they were pushing the car over the knuckle, the chain broke permitting the car to travel at a tremendous rate to the bottom of the slope, and unfortunately it struck Patronick. The car got off the track about 5 feet above the crosscut, in which he had been told to stay. Had he obeyed the orders given to him by the miner, to stay in the crosscut, this accident would not have happened. His body was found along the slope about 20 feet from the crosscut.

John Hayes, runner, at the Dorrance colliery, was killed on the slant slope by a runaway car jumping the track and catching him against the rib. The runaway was caused by the breaking of a coupling between the first and second cars of a trip of four loaded and one empty car.

Anthony Baltrichus, driver, at the Hollenback colliery, was bringing out a trip of loaded cars from No. 2 slope, first west. His patcher, Reese Phillips, told him to ride out on the cars, but in some unknown way he was caught between the rib and the car and was killed.

# By Premature Blasts

Joseph Grassberger, miner, in No. 6 slope, Susquehanna Coal Company, was preparing to light a squib to fire a blast but the blast was fired prematurely and injured him so severely that he died within two hours.

Patrick Kealey, miner, was fatally injured and Binio Vinea, laborer, had his chest bone broken at the Auchineloss colliery by the explosion of a cartridge. They were working night shift and had fired a shot in the coal but it did not do its work. So he prepared to charge it again with about 29 inches of black powder, and the supposition is that the charge would not go into the hole and that they were forcing it in either with the coal drill or the scraper, which somehow caused a spark and set the powder off. The miner received nearly the whole charge and died about nine hours after the accident.

Michael Slater, miner, at the Maxwell colliery, worked in a chamber in No. 7 tunnel, West Ross vein. His laborer said that he had tamped a hole and put a squib into it and was going to tamp another near by, and it is supposed that his lamp came is contact with the squib setting off the blast, killing him instantly.

Patrick Cooney, miner, at the Sugar Notch colliery, after preparing a hole to fire, lit the squib and went back to the cross-heading to wait for the blast to go off, which it failed to do, after giving what he thought was sufficient time. He then went back to examine it, when the blast went off. The coal struck him mostly on the head and neck. He was taken to Mercy Hospital where he died the day of the accident about 10.40 P. M.

# By Falling Down Slope

William Wright, bellman, at No. 6 slope, Susquehanna Coal Company, undertook to walk up the slope and while so doing was overtaken by the cage, and was either knocked down by the cage or fell away in trying to avoid it. This accident was due to violation of the rules which forbade all traveling on the slope.

# By Falling Down Shaft

Kadzimus Ochram, laborer, at the Dorrance colliery, fell down the shaft from the Hillman landing to the Baltimore vein, about 300 feet and was instantly killed. He came running to get on the carriage after the bell was rung and the carriage was in motion. He was warned by the men on the carriage but persisted in his efforts to get on the carriage, with the result stated.

# By Cars

Joseph Petlock, plane feotman, at the Franklin colliery, was struck by an empty car which became uncoupled while two empty cars were being lowered from the dump. The car jumped the track at the foot and struck Petlock, injuring him so seriously that he died about 6 P. M. of the same day.

Samuel Figulia was employed in No. 6 breaker of the Susquehanna Coal Company unloading condemned coal. He had finished unloading the car and the teamster was ordered to pull back the car. He had already pulled back two cars and while pulling the third car back, Figulia stood alongside of the track and in some manner slipped and had one leg caught under the wheel severing that member entirely. He was taken to the hospital and died on arriving there.

Antonic Kozlofski, car loader at No. 7 breaker of the Susquehanna Coal Company, was instantly killed by being run over by a Pennsylvania Railroad car. The car, which was half loaded had run past the loading chute. The deceased stepped behind the car in order to bar it back to the loading chute. At the same time the car runner was running three more cars on the same track. The rails were wet and muddy and he could not bring the cars to a stop before they slightly bumped the half loaded car, causing it to start and run over the victim. The car runner called loudly to the victim to look out but he evidently did not hear him.

# By Machinery

Theodore Tucker, slatepicker, at the Red Ash No. 2, was sent by the screen boss to start the coal running in the chute leading from the elevator to the rolls. There is a hole in the side of the chute to allow a person to go into the chute to start the coal running when it blocks. The hole is 25 feet from the elevator. He was next seen on the floor of the screen room at the foot of the elevator, the supposition being that he had come through the elevator. He was injured about 4 P. M. and died at 11 P. M. at the Wilkes-Barre City Hospital.

Thomas McDonald, laborer, at the Hadleigh colliery, outside, was shoveling coal into the scrapper line along with six other men when a rush of the bank started. He became confused and instead of standing still, he ran into the conveyor line. The other men who were much nearer the line than he was, when the rush occurred, stood still and escaped injury.

# IMPROVEMENTS DURING THE YEAR LEHIGH AND WILKES-BARRE COAL COMPANY

# Hollenback No. 2 Colliery

Outside.—Five hundred horse power battery B. & W. boilers completing plant of 2,000 horse power.

Inside.—No. 11 tunnel, bottom split Red Ash to top split Red Ash, 50 yards.

No. 12 tunnel, bottom split Red Ash to top split Red Ash, 50 yards.

# Empire No. 4 Colliery

Outside.—Machine, smith and car shops to replace shops destroyed by fire April 18, 1903.

Inside.—No. 24 tunnel, extended from top split Red Ash to Ross, 70 yards. Hoisting shaft enlarged to standard size.

# South Wilkes-Barre No. 5 Colliery

Outside.—Duplicate 35 foot Guibal fan, No. 1 air shaft. Barn and carriage house. Inside and outside foreman's office.

Inside.—No. 8 tunnel, Kidney to Abbot, 160 yards. No. 10 tunnel, top split Baltimore to top split Baltimore, 140 yards. No. 11 tunnel, Kidney to Abbot, 90 yards. Tunnel airway, across basin

for No. 10 tunnel return, 124 yards. Rock plane airway, Kidney to Abbot for No. 9 tunnel return, 70 yards. Rock plane airway, 3d West Hillman to No. 9 tunnel Abbot, 90 yards. Three iach drainage bore hole, No. 5 slope Hillman sump to Baltimore.

# Stanton No. 7 Colliery

Outside.—Duplex air compressor, simple steam, compound air. Five hundred H. P. battery, B. & W. boilers.—Colliery shop.

Inside.—Triple-expansion, condensing, duplex pump, brick arch pump room, and sump tunnel to shaft sump. No. 4 Rock slope, from surface to Abbot, 100 yards.

# Jersey No. 8 Washery

Conveyor, railroad and steam shovel equipment to work Hartford No. 6 culm bank.

# Sugar Notch No. 9 Colliery

Outside.—Five hundred H. P. battery, B. & W. boilers.

Inside.—Compound duplex pump and brick and structural steel pump room, located on 3rd West Ross. Rock plane airway, Red Ash to Baltimore, 100 yards. No. 15 tunnel, Baltimore to Stanton vein, 195 yards.

# Maxwell No. 20 Colliery

Outside.—Five hundred H. P. battery, B. & W. boilers. Duplex air compressor, simple steam, compound air. Brick engine house for compressor and electric lighting plant.

Inside.—No. 10 tunnel, extended from Ross to Baltimore, 312 yards. No. 16 tunnel, Hillman to Hillman across basin, 37 yards. Compound condensing duplex pump, pump rock in rock, and tunnel Baltimore to Twin for sump, Baltimore shaft to level. Sanitary barn to accommodate thirty (30) mules, Red Ash shaft level.

# LEHIGH VALLEY COAL COMPANY. Dorrance Colliery

Hillman vein slope extended 654 feet into the basin north of cemetery anticlinal. Tunnel finished from Abbot to Snake Island—Middle plane level. Tunnel commenced on Upper level to same vein. Tunnel is being driven from Hillman to Five Foot vein, 232 feet. New slope started from lower Bennett gangway to reach the basin below Slant slope. New inside slope started to work river warrant—Hillman vein. Preparations are being made and work started to sink main hoist shaft from Baltimore to Red Ash, also second opening rock slope for same. A new stable is being made, and improvement to pump houses. Fire emergency water lines extended during the year. A series of test holes were put down from surface

to determine safe working rock cover on the flats near the river. New concrete cribs have replaced the old wooden ones in both hoist and ventilating shafts. New and improved safety gates and stop blocks put on Baltimore shaft. New brick electric light house. New brick and concrete safety lamp house. New concrete pump house on river bank.

#### Franklin Colliery

No. 8 slope extended 320 feet to Brown pillar line. No. 8 tunnel extended 190 feet to Ross vein. No. 15 tunnel is being driven from Red Ash rock slope to Ross, 480 feet to date. Tunnel extended 150 feet in Baltimore slope district to Abbot vein. New tunnel from top to bottom split of Red Ash completed. A new slope started in Ross vein. A new inside slope begun in top split of Red Ash. The old Brown slope reopened. Work is progressing on installation of 300 additional H. P. return tubular boilers. New fan, blowing engine installed. New 14x20 engine set in place at Red Ash second outlet shaft. New corrugated iron powder house. New dam and corrugated iron pump house. Washery completed and working. Number of repairs and alterations made in breaker. Baltimore fan house rebuilt.

#### SUSQUEHANNA COAL COMPANY

# Colliery No. 5

Outside.—Jig house completed. New steel bridge over breaker tracks. New compressor house, and 2-201 and 36x20x36 Ingersoll-Sergeant duplex two stage compressors. One hundred new steel mine cars.

Inside.—Rock plane, Mills to George, unfinished.

#### Stearns

Inside.—No. 4 shaft tunnels and returns completed, rock turnout for empty cars unfinished. New plane in Ross unfinished.

# Colliery No. 7

Outside.—New lamp house completed. New timber yard completed. Remodelling No. 7 breaker, unfinished.

Inside.—New plane in Cooper seam unfinished. Slope No. 14, Ross seam.

# Colliery No. 6

Outside.—Two thousand five hundred H. P. B. & W. boiler plant completed, and old cylinder boilers at No. 6 shaft and No. 6 slope abandoned. New rolls and screens in breaker. New railroad from No. 7 shaft to breaker, about 1½ miles, completed.

Inside.—New tunnel slope No. 6 to N. shaft No. 6, unfinished.

New slope in Ross tunnel No. 6 mainished. New tunnel slope No. 6, Ross to Ross, unfinished. Shaft No. 7 sunk 40 feet, concreting to rock and permanent engine and head frame foundations completed.

# DELAWARE AND HUDSON COMPANY Convngham

No. 4 tunnel driven from the Abbot to Snake Island vein, 325 feet. No. 5 tunnel driven from the Abbot to Snake Island vein, 100 feet. No. 6 tunnel driven from the Abbot to Snake Island vein, 150 feet. The Abbot vein slope No. 4 was sunk a distance of 900 feet. Hillman shaft recribbed from rock to surface, and new head frame and house built.

# DELAWARE, LACKAWANNA AND WESTERN RAILROAD COMPANY Auchineloss No. 2 Shaft

A tunnel 7x12 has been driven from the Baltimore vein for the purpose of the development of the Hillman vein. Auchincloss No. 2 shaft.—The Baltimore vein has also been connected by a short tunnel to the Hillman vein for ventilating purposes.

#### Bliss Mines

The southwesterly side of this breaker was entirely reconstructed and improved upon by the installation of new shakers, belt conveyors and spiral slate pickers. A tunnel 7x12, 396 feet long, was driven from the Red Ash vein to the Ross vein for ventilation and haulage. One 10 ton electric locomotive was installed in the Ross slope, Espy tunnel, doing away with mules on this lift. A small 10 foot fan was located on the Forge vein for ventilation.

#### Truesdale

This is a new opening or operation. They are putting down at this location two shafts to be known as No. 1 and No. 2 Truesdale shafts. No. 1 will be a four compartment shaft, one pump way, two hoist ways and one airway, 45 feet 2 inches by 14 feet in the clear. No. 2 shaft will have two hoist ways and one air and will be 37 feet 2 inches by 14 feet in the clear. Operations have also been started to sink a slope to the Mills vein, a distance of 1,500 feet to the basin. They have also opened an old tunnel, known on geological survey maps as the Holland tunnel, and already gangways are being driven east and west to what is known as the Forge vein in this locality. The outside appearances of the collicries have been improved by the use of mineral paint and whitewash.

#### RED ASH COAL COMPANY.

#### Colliery No. 1

One 12 and 18x8x18 compound noncondensing duplex plunger Jeanesville pump.

## Washery No. 3 Breaker

Fitted and alterations made and equipped with shakers, jigs, etc., for washing the coal from culm banks. One 24x48 frame boiler house, stone foundation, gravel roof, built for the washery. Six cylindrical boilers 30 diameter by 30 feet long, formerly used at No. 1 breaker, placed in new boiler house at washery.

#### Mine Foremen's Examinations

The examinations of candidates for mine foremen and assistant mine foremen certificates resulted in the following named persons being granted certificates:

#### Mine Foremen

John S. Thompson, Pittston; Andrew Guard, Wilkes-Barre; Alfred King, Wilkes-Barre; William J. Powell, Wilkes-Barre; Thomas D. Evans, Wilkes-Barre; John S. Jones, Wilkes-Barre; Edward Leonard, Wilkes-Barre; David T. Richards, Wilkes-Barre; William D. Jones, Wilkes-Barre; Thomas Martin, Edwardsdale; John H. Edwards, Edwardsdale; Daniel Jones, Edwardsdale; James F. Gildea, Ashley; John P. Boase, Aavoca; Thomas Vinton, Plains; John E. Richards, Plymouth; William Arthur, Plymouth; David D. Davis, Plymouth; David M. Evans, Kingston; Joseph E. Evans, Kingston; Matthew Nash, Nanticoke; Charles E. Morgan, Wanamie; Morgan Phillips, Christopher; David J. Davis, Christopher; Thomas J. Morgans, Christopher; Richard D. Evans, Christopher; William J. Jones, Pittston; David Lewis, Sugar Notch; Alexander Hair, Wyoming.

#### Assistant Mine Foremen

John S. Davies, Dorranceton; Edward Foulkes, Wilkes-Barre; Morgan D. Jones, Wilkes-Barre; Luke F. Halley, Wilkes-Barre; Llewellyn Lloyd, Wilkes-Barre; John Feldman, Wilkes-Barre; David Simmons, Wilkes-Barre; Benjamin Turner, Wilkes-Barre; John R. Davis, Wilkes-Barre; William H. Owen, Wilkes-Barre; Clifton Williams, Wilkes-Barre; William J. Nickolas, Edwardsdale; Morris Hughes, Edwardsdale; Patrick A. Grady, Ashley; Elwood Gross, Plymouth; George A. Spare, Plymouth; David T. Richards, Plymouth; David Jenkin, Plymouth; John E. Jones, Plymouth; George A. Bound, Kingston; Henry Coates, Yates; William J. Walters, Nanticoke; William S. Davis, Nanticoke; William Davis, Nanticoke; John M. Wilde, Nanticoke; John Bryant, Nanticoke; George H. Dyer, Nanticoke; William Summers, Alden Station; Walter L. Morgan, Wanamie; William X. Jones, Nanticoke; Bernard F. McGrane, Sugar Notch; L. S. Reese, Westmoor; Hugh E. Hughes, Peeley; John C. Parry, Wilkes-Barre.

# Eighth Anthracite District

LUZERNE COUNTY

Plymouth, Pa., February 15, 1904.

Hon. James E. Roderick, Chief of Department of Mines:

Sir: I have the honor of herewith transmitting to you my first report as Inspector of Mines for the Eighth Anthracite District, for the year ending December 31, 1903.

The year was one of unusual activity. The production amounted to 6,334,962 tons, an increase of 1,438,901 tons over the production from the same number of mines in 1901, when the total was 4,896,061 tons. The number of tons mined for each fatal accident in 1901 was 148,335. In 1903 the number of tons mined for each fatal accident inside was 180,999; for each non-fatal accident 60,333. The total number of fatal accidents was 37. The report contains the usual tables of statistics and a brief description of the condition of the mines.

Respectfully submitted,

D. T. DAVIS, Inspector.

# Eighth Anthracite District, 1903 SUMMARY OF STATISTICS

Number of miner in district	37
Number of mines in district,	
Number of mines in operation,	37
Number of tons of coal produced,	6,334,962
Number of tons shipped to market,	5,783,353
Number of tons sold at mines to local trade,	92,248
Number of tons consumed at mines in generating steam	
and heat,	459,361
Number of persons employed inside the mines,	8,246
Number of persons employed outside,	3,187
Number of fatal accidents inside the mines,	35
Number of tons produced for each fatal accident inside,	180,999
Number of persons employed per fatal accident inside,	236
Number of fatal accidents outside,	2
Number of persons employed per fatal accident outside,	1,593
Number of wives made widows by fatal accidents,	21
Number of children orphaned by fatal accidents,	. 33
Number of non-fatal accidents inside the mines,	104
Number of persons employed per non-fatal accident in-	
side,	79
Number of non-fatal accidents outside,	. 15
Number of persons employed per non-fatal accident out-	
side,	212
Number of steam locomotives used inside,	5
Number of electric motors used inside,	6
Number of fans used for ventilation,	37
Number of gaseous mines in operation,	36
Number of non-gaseous mines in operation,	1
Number of new mines opened,	1

# TABLE A.—Eighth Anthracite District, 1903.

# PRODUCTION OF COAL

Names of Companies	Tons
Lehigh and Wilkes-Barre Coal Company,	1,684,893
Delaware and Hudson Company,	1,258,591
Delaware, Lackawanna and Western Railroad Company,	808,157
Parish Coal Company,	808,771
Kingston Coal Company,	620,679
West End Coal Company,	483,967
Plymouth Coal Company,	$226,\!492$
George F. Lee Coal Company,	63,851
North American Coal Company,	316,778
Old Plymouth Coal Company,	59,511
West Nanticoke Coal Company,	3,272
Total,	6,334,962
Production by Counties	
Luzerne,	6,334,962

TABLE B.—Eighth Anthracite District, 1903

Fatal and non-fatal accidents; number of tons of coal produced per accident; number of persons employed; number employed per accident

	per non-fatal accident	361 168 190 414 102 102 278 278
- shie	Mumber of employes out	
apis.	Number of employes out per fatal acoident	28.0 38.0 1,538
obia	Number of employes in per non-fatal accident	25. 56. 91. 129. 263. 263. 263. 199. 199.
obis	Number of employes in per fatal accident	156 212 212 485 407 1175 1175 226
S	Total number of employe	2.593 2.576 1.831 1,626 1,312 864 444 117 56 11,433
əbia	duo sevolqma lo redmnN	38.0 671 870 146 146 59 74 74 146 59 7187
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Der	Donbord produced state fatal	104,883 187,210 260,384 260,384 124,136 161,322 161,322
sidents	IstoT	288 288 111 113 388 111 1119
Non-Fatal Accidents	Outside	014 0144H H I
Non-F	9biznI	104 104
ents	IstoT	£2 4.0.70 to 12.
Fatal Accidents	- Outside	H H
Fatal	9bianI	612 00 20 10 00 11 12
	Names of Companies	Delaware and Hudson Co., Lebigh and Wilkes-Barre Coal Co., Lebigh and Wilkes-Barre Coal Co., Lepigeston Coal Co., Kingston Coal Co., Kingston Coal Co., Frymouth Coal Co., George F. Lee Coal Co., George F. Lee Coal Co., Chymouth Coal Co., Chymouth Coal Co., Chymouth Coal Co., Color St., Coal St.,

TABLE C.—Eighth Anthracite District, 1903 Classification of Fatal Accidents

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		Miscellancous causes	
		sufficiented by coal, etc.	
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		solielited at bodenic	
	by Falling Into	Manways, breasts, etc.	
es		sod als	
Inside of Mines	15y F	shafts	HH H
		By blasts, etc.	
		Powder and dynamite	-
		Smothered by gas	
		By explosion of gas	- c1
		By mine cars	H =3F= == 5
	jo s	100H	11:00 11 11   G
	By Falls	. Slate	
	D	(Youl	
			January, Pelemary March March March June June August September November Totals,

TABLE D-Eighth Anthracite District, 1903 Classification of Non-Fatal Accidents

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		Spiral outside		155
8.9		Miseellaneous causes	H-0 H	ತ
f Min		By boiler explosions		
Outside of Mines		Dy suffecation		
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		By cars	e	10
		Spisui [81.7]	0004411480-40-91	104
		Miscellaneous causes	о : н нан : он	13
		Sufficated by coal, etc.		<u>.</u>
		By mules		4
		rushed at batteries		:
	By Falling Into	Manways, breasts, etc.		
nes		satus		
Inside of Mines		Shafts		-
nside		By blasts, etc.	ਰ ਾਹੀ ਜਾ ਜਾਹੀਜ਼ ਜਾ	o. 
ı	-	Powder and dynamite		
		Smothered by gas	HH :70 :400 :01HF	:
		By explosion of gas	ক্তাত্ৰ ক্লতাতা লক	1 24
		By mine cars	4 01 100	11 27
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	By Falls			s -
			January. Pebniary. March April, May. June Juny. August September, November, December,	Totals,
			January Februar March, April, June, June, July Septemb October, Novemb	To

Occupations of Persons Killed or Fatally injured Inside and Outside the Mines TABLE E.—Eighth Anthracite District, 1903

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	Total outside	21
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	Total inside	65 63 At 12 63 13 H At 53 63 63
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	Door-boys and helpers	-
Inside	Torkers and runners	= = = = = = = = = = = = = = = = = = = =
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		January, February Mar h. May. Inn. Intly Author Intly September October Describer Totals.

Occupations of Persons Injured Inside and Outside the Mines TABLE F.—Eighth Anthracite District, 1903

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	Total outside	H chart motoring in
	All other employes	- ::::::::::::::::::::::::::::::::::::
	Pook-keepers and clerks	
	Slate pickers (men)	
Outside	Slate pickers (boys)	
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	Blacksmiths and carpenters	
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	abizni IntoT	8841-111885-459 101
	All other employes	6101404 CIHH H
	uəm Yasqınə')	
	սəւաժառվ	
	Door-boys and helpers	F100 T1
Inside	Drivers and runners	CO H 401HCO H4 0
	Miners' laborers	
	. sraniM	40 [140000000]
	Fire bosses and assistants	
	nemerol onim tustsissA	
	Mine foremen	e1 e1
		January. February March, April May, June,

## TABLE G.—Eighth Anthracite District, 1903

Nationality of Persons Killed or Fatally Injured Inside and Outside the Mines

Annual Control of the		-							
	American	English	Welsh	iri.	Polish	Ltalian	Lithuanlan	Austrian	Totals
fanuary Sebruary, March	1	1 1	1 1		<u>1</u>			1 1	
April, day, une, (uly,	ii			1	1 2 1	1	1		
ugust. ieptember, ietober, Iovember,			1						
Totals,	9	3	6	4	2	3	1	2	3

TABLE H.—Eighth Anthracite District, 1903.

Nationality of Persons Injured Inside and Outside the Mines

	American	English	Welsh	Irish	German	Polish	Italian	Slavonian	Lithwanian	Austrian	Russian	Armenian	Totals
January, February March, April, May, June, July, August, September, October, November, December,	3 1 2 2 3 1 1 1 2 3 3 4 4	1 2	2 1 2 1 2 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	1 1 1 1 2	1 2	2 3 1 3 7 5 2	1	1 1 2 3	1 1 1 1 1	1 1	1	1	10 9 4 16 3 13 14 9 9 9 9 8 18
Totals,	28	4	16	6	3	2+	2	12	8	3	7	1	119

# TABLE I.—Eighth Anthracite District, 1903

Operators and mines, kind of openings, type and size of fans, size of furnaces, volume of air produced by fan or furnace per minute, number of splits of air currents, number of persons employed inside, and quantity of air produced for each employe per minute.

Average number of cubic feet for the provided for the provided for the form the following the follow	570 955 955 955 955 955 956 956 956
Mumber of persons employed inside	601 209 2758 379 379 473 301 473 317 292
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Total quantity of air per lis ai suitationio stunim the splits in cubic feet	342,700 85,300 45,850 361,730 1131,175 1188,188 243,666 1161,000
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-uno tin to stilds to tedimin street	11 10 10 11 11 11 11 11 11 11 11 11 11 1
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Number of revolutions per	56555588888949 888888888888888888888888888
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Diameter of fan in feet	444444844448444484444484444484444844448444844484448444844484444
Methed of ventilation	Fan Fan Fan Fan Fan Fan Fan Fan Fan Fan
Gaseous or non-gaseous	Gaseous, Gas
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Names of Operators and	Lehigh and Wilkes-Barre Coal Co. Nottingham colliery. Nottingham colliery. Nottingham colliery. Nottingham colliery. Nottingham colliery. Wanamie colliery. Wanamie colliery. Wanamie colliery. Wanamie colliery. Wanamie colliery. Lance colliery. Lance colliery. Lance colliery. Lance colliery. Lance colliery. Lance colliery. Lance colliery. Phymouth No. 2. Phymouth No. 2. Phymouth No. 3. Phymouth No. 3. Phymouth No. 3. Phymouth No. 3. Phymouth No. 3. Phymouth No. 4. Phymouth No. 5. Phymouth No. 5. Phymouth No. 5. Phymouth No. 6.

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Delaware, Laskawanna and Western R. R. Co. Avondate colliery. Woodward colliery. Woodward colliery. Woodward colliery.	Woodward colliers.  Volument Colliers.  Parrish colliers.	Parrish colliers, Buttonwood celifers,	Buttonwood colliery,	Kingston Coal Co. No. 2 Short. No. 2 Short. Gaylord collicy.	West End Coal Co. Sand dart. Long dritt.	George F. Lee Coal Co., Chaune y colliery,	Plymouth Coal Co. Dodson,	

TABLE 1.—Eighth Anthracite District, 1903 Operators, Location of Collieries, Railroads, Etc.

a a		######################################									
Railroad to Mine	7.00 8.4.4.4.4.4.4.4.4.4.4.6.6.10.10.10.10.10.10.10.10.10.10.10.10.10.	Delaware and Hudson Delaware and Hudson Delaware and Hudson Delaware and Hudson Delaware and Hudson	D., L. and W.	C. R. R. of N. J. C. R. R. of N. J.	D., L. and W. D., L. and W.	Pennsylvania	D., L. and W.	D., L. and W.	C. R. R. of N. J.	Pennsylvania	D., L. and W.
P. O. Address	Wilkes-Barre, Wilkes-Barre, Wilkes-Barre, Wilkes-Barre,	Scranton, Scranton, Scranton, Scranton, Scranton,	Kingston,	Plymouth,	Edwardsdale,	Shickshinny,		Nanticoke,	Plymouth,		
Name of Superintendent	Morgan R. Morgans, inside supt.; W. H. Herring, outside supt. do. do.	E. R. Pettebone, E. R. Pettebone, F. R. Pettebone, E. R. Pettebone, E. R. Pettebone,	Henry G. Davis,	Thomas R. Evans,	Gwilliam Edwards,	H. A. Fillmore,		M. H. Corgap,	J. J. Richards,		
P. O. Address	Wilkes-Barre, Wilkes-Barre, Wilkes-Barre,	Scranton. Scranton, Scranton, Scranton, Scranton,	Scranton,	Plymouth,	Kingston,	Seranton,	Plymouth,	Wilkes-Barre,	Wilkes-Barre,	Kingston,	Plymouth,
Name of General Su- perintendent	C. F. Huber, C. F. Huber, C. F. Huber, C. F. Huber,	C. C. Rose, C. C. Rose, C. C. Rose, C. C. Rose, C. C. Rose,	R. A. Phillips,	H. II. Ashley,	R. S. Mercur, R. S. Mercur,	H. H. Brady, Jr.,	James B. Davies,	George F. Lee,	H. W. Samms,	A. D. W. Smith,	H. E. Rissinger,
County	Luzerne, . Luzerne, . Luzerne, . Luzerne, .	Luzerne, Luzerne, Luzerne, Luzerne, .	Luzerne, .	Luzerne, .	Luzerne, . Luzerne, .	Luzerne, .	Luzerne, .	Luzerne, .	Luzerne, .	Luzerne, .	Luzerne, .
Names of Operators and Col- lieries	Lehigh and Wilkes-Barre Coal Co. Notinghan, Lance, Reynoids, Wanamie,	Delaware and Hudson Co. Plymouth No. 2. Plymouth No. 4. Plymouth No. 4. Plymouth No. 5. Boston.	Delaware, Lackawanna and Western F. R. Co. Woodward, Avondale,	Parrish Call Co. Buttonwood,	Kingsten Coal Co. Kingsten No. 2, Gaylerd,	West End Coal Co.	Plymouth Coal Co. Dodson,	George F. Lee Coal Co.	North American Coal Co. Plymouth washery.	West Nanticoke Coal Co.	Old Plymouth,

Number of tons of coal mined in each colliery, number of days worked, number of persons employed, number killed and TABLE 2.—Eighth Anthracite District, 1903

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	Zamper of employes	984	2,576		1:5377	1000	0 8 8	1,318	1.62	
	Number of days worked	- 219 219 219 119 119	241	Ø.	248 258	u#5	71	F. E	71 71	
d, etc.	Total production of coal in tons	685,178 871,295 450,149 175,338	1,684,893	15,511	18 18 18 18 18 18 18 18 18 18 18 18 18 1	1,248,0%	1,258,5 d	597, 303 210, 854	11.7.7	
powder used,	Zumber of tons sold to local trade and besu bus sold in the second sold sold in the second sold sold sold sold sold sold sold sol	17. 87.87 1.88.87 1.88.88 1.88.88	12,410		4,141	7,213	7,213	4, 663	6,1>1	
JO	mreals not besu snot to redamN selvented for the bare	70, 736 25, 211 33, 656 14, 39	126,967		31,044 22,036 15,12,12,12,12,12,12,12,12,12,12,12,12,12,	112, 202	112,269	43,767	83,565	
nber of ke	beqqida loos lo and to redmuN esiwradio to list yd	626, 778 348, 363 414, 455 150, 865	1,545,516	17,511	150,571 287,388 388,598 287,128	1,123,65	1,139,176	750,677 169,883	718,48	
injured, number of kegs	County	Luzerne, Luzerne, Luzerne, Luz-rne,		Luzerne,	Luzerne, Luzerne,l Luzerne,l Luzerne,j Luzerne,j			Luzerre, Luzerne,		
Names of Operators and Collievies		Debigh and Wilkes-Barre Coal Co. Nottingham. Lance. Wahamie. Reynolds.	Totals,	Dymouth No. 2 Washery,	Plymouth No. :: Plymouth No. :: Plymouth No. 4. Plymouth No. 4. Plymouth No. 5. Boston,		Totals,	Delaware, Lack wann and Western E. R. Co. Woodward, Avondale,	Totals,	

†Totals in this column are averages.

Zumber of horses and mules	106	225	113	158	92		91	37	18	8
et dynamite of pounds of dynamite	48,100	CS, 150	800 309		36,500		36,500	200	1,350	
Number of kegs of powder used	10,673	23,448	16,917	21,265	9,6.0		9,600	4,377	4004	
Number of non-fatal accidents	0.00	11	1-4	11	co		00	0.5	60	
Number of fatal accidents	€: →	50	10	3	co		00			
Zumber of employes	673	1,626	1,058	1,312		61	804	444	117	20
Number of days worked	227	255	264	225	242	211		201	17.9	266
enof mi face to moiteubord fateT	331,350 477,421	808,771	504,00S 116,581	620,679	281, 203	102,764	483,967	226, 492	63,851	316,778
Number of tons sold to local trade and used by employes	10,981 8,747	19, 728	31, 297 2, 650	33,947	6,806		6,806	2, 443	453	1,334
Mumber of tons used for steam and heat at collieries	25, 402 34, 247	59,649	13,238	17,638	23,160	200	23,800	20,000	5,475	6, 790
Number of tons of coal shipped by rail or otherwise	294,967 434,427	729,394	459, 463 109, 631	569, 094	351,297	102,061		204,049	57,923	307,654
County	Luzerne,		Luzerne,		Luzerne,	Luzerne,		Luzerne,	Luzerne,	Luzerne,
Names of Operators and Collieries	Parrish Coal Co. Buttonwood,	Totals,	Nos. 2 and 3 shafts, Colliery No. 2. Gaylord,	Totals,	West End,	West End washery,	Totals,	Plymouth Coal Co.	George F. Lee Coal Co.	North American Coal Co.

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Old		Was			

TABLE 2-Recapitulation

13,718	388 382	11 11,20% 1,304 118 3 9,40 36,500 16 8 4,577 50 50	6.00	119 152,468 196,089 1,418
	1, 194		58.85	11,433
		1311		
-	_			6,131,982
			:	92,34
126,967	110 120 130 130 130 130 130 130 130 130 130 13	11 (g) (g) (g) (g) (g) (g) (g) (g) (g) (g)	6, 57 9, 65 100 100 100 100 100 100 100 100 100 10	459, 361
1,515,716	1, 139, 176 718, 408 729, 334	76 5, 094 453, 361 264, 049	25.03 25.03	5, 783, 363
Luzerne,	Luz rne.	Luzerne, Luzerne, Luzerne,		
Lehigh and Willes-Darre Conj Co.		Kingston (vall (°a., West Efail (°a.)	George F. Leavel Co. North American Cal Co. West Cantoneth Cal Co. West Nantocke Cal Co.	Totals,

\*Not including was heries,

# TABLE 2-Continued

I	ering	Tubular  Tubular  Horse power  Total horse power  Number of steam engines of Number of pumps delivered minute—gallons per min  Capacity in gallons per min  Number of surface  Sundity delivered to surface  Water to surface  Total horse power  Number of pumps delivered with the surface of surface o	10 365 6 1,485 1,485 1 14 8.112 3 4,56.062 3 8,99.9 2,500 1 2 500 1 2 52 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8	18 893 32 5.910 6.803 6 134 12,950 7 9,258 5,465 3		1   1   1   1   1   1   1   1   1   1	126 3,800 9 2,000 5,800 105 9,785 5 8,900 3,950 4	126 3,800 9 2,460 5,860 105 9,755 5 8,900 3,950 4	6 180 13 2,000 2,180 2 2 504 4 5 8,001 4,700 1	6 150 21 4,504 4,084 3 6 45 4,927 6 9,501 5,700 3	18 720 11 1,630 2,379 18, 3,655 1 1,500 1,100 1
	4	Cylindrical Cylindrical	Luzerne,		Luzerne,	Luzerne, 36 Luzerne, 36 Luzerne, 11 Luzerne, 38 Luzerne, 38 Luzerne, 38	01	al	Luzerne,		Luzerne,
		Names of Operators and Collieries	Lehigh and Wilkes-Barre Coal Co. Nottinghum. Lance. Walamie, Reynolds,	Totals,	Delaware and Hudson Co.  Plymouth No. 2 washery,	Plymouth No. 2, Plymouth No. 3, Plymouth No. 4, Plymouth No. 5, Bytmouth No. 5, Boston,		Totals,	Delaware, Lackawanna and Western R. R. Woodward,	Totals,	Parrish Coal Co.

Buttonwood,	Luzerne,		:	9	1,750	1,350			:	21	19	П	299	65	:	2
Totals,		-	0.72	20	5,000	8,730			: :	ă ļ	7,421	0.1	2,167	1,452	1:	00
Nos. 2 and 3 shafts, Colliery No. 2, Gaylord,	Luzerne,	약캠	1,115	F .	150	1,265	4			N P	1,011	01-	\$ \$ \$ \$	35		
Totals,		67	1,730	1	126	1,8%	7			1	1,635	00	1,260	(00)	:	:
West End,	Luzerne,			1 1	1,675	1,675	9			3	1,005	00	715	13	1	00
West End washery,	Luzerne,			00	375	50	.:			~1	Time					1
Totals,				17	2,050	2,050	9			13	1,155	50	515	297	-	00
Plym auth Ceal Co. Dodson,	Luzerne,			21	1,500	1,500				22	1,750	To	2.140	674	1	[] []
Chauncey,	Luzerne,			41	320	350				- TT	967					
North American Coal Co. Plymouth washery,	Luzerne,			9	199	260		1	:	-	11 60					:
Old Plymouth Coal Co.	Luzerne,			EQ.	400	400				9	910					
Washery,	Luzerne,			¢1	0,5	950				-	[ 13 ]	-	Q17	Salo		
Grand totals,		750	1,000	129	20, 734	58,057	119		9		f0,368	60	1 .	18,506	7	15
		L	TABLE		2-Recapitulation	lation										
Lehigh and Wilkes-Barre Coal Co., Delaware and Huskon Co., Co., Forware and theison Co., Kingston Coal Co., Kingston Coal Co., Kingston Coal Co., Kingston Coal Co., Kong F. Jac Coal Co., Orenge F. Jac Coal Co., George F. Jac Coal Co., Orenge F. J	Luzerne, Luzerne, Luzerne, Luzerne, Luzerne, Luzerne, Luzerne, Luzerne, Luzerne, Luzerne, Luzerne, Luzerne, Luzerne, Luzerne, Luzerne, Luzerne, Luzerne, Luzerne, Luzerne,	11 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	3, 860 1, 730 1, 730 7, 333	320 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	2, 910 2, 900 3, 900 1, 500 1, 500 1, 500 1, 500 2, 600 1, 500 1,	6.803 5.869	9 E 49 E		ω   ω	134 105 118 118 118 118 118 118 118 118 118 11	12, 956 9, 785 4, 927 1, 621 1, 155 1, 550 1	t-10 G313105 T [5]	9, 238 8, 900 9, 501 1, 200 1, 100 1,	5, 467 6, 700 1, 467 9, 674 800 800 18, 396	60 H	(O 4) (O (O () )   10

TABLE 3—Eighth Anthracite District, 1903. Number of Each Class of Employes at Each Colliery

	Cirand total inside and outside	600 964 347 665	2,576	558 654 855 481 545	2,593	1,318	1,834
side	Total outside	153 242 96 180	671	165 165 165 165 165 165 165 165 165 165	722	264	380
d Out	All other employes	323.35	233	2228	278	147	191
ploye	Dook-keepers and clerks	61 44 67 65	1	C1 C1 C1 C1	00	60.63	1 2
ns En	Slate pickers (men)	15 34 19 22	8	28 40 18	128	12	13
Person	Slate pickers (boys)	75 S. E. G.	217	25 4 25 83	201	25 63	55
Jo	Engineers and firemen	28.812	96	25 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	13	6.69	8
tior	Blacksmiths and carpenters	1455	26		65	6.9	12
upa		· ·	44		ro		63
000	Superintendents			* : : : :			
	Total inside	4451524 1524 1534	1,905	353 300 393	1,871	1,054	1,454
side	All other employes	28 :83	144	676	68	68	68
yed In	Сотрану теп	70 40 50 50	226	#E 24 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8	236	213 17	230
mploy	uəmqmu-I	9 6	22	(0) mm(3)	12	10	14
sons E	Door-boys and helpers	30 17 16 24	81	110011	74	229	62
	Drivers and runners	80 87 87 87 87 87 87 87 87 87 87 87 87 87	234	60 23 33 60 60 60 60 60 60 60 60 60 60 60 60 60	246	106	145
ions o	Miners' laborers	110 130 14 110	484	119 118 118 90 90 128	638	320 115	435
cupat	Miners	140 280 61 204	685	24 104 125 125 125 125 125 125 125 125 125 125	561	347	452
Ŏ.	Fire bosses and assistants	10 00 01 44	161	00000000	13	0,00	1=1
	Assistant mine foremen	-01-01	9		GI		e)
	Mine foremen		70		1.0	- er	4
	County	Luzerne, Luzerne, Luzerne, Luzerne,		Luzerne, Luzerne, Luzerne, Luzerne, Luzerne, Luzerne,		Luzerne, Luzerne,	
	ames of Operators and Collieries	ehigh and Wilkes-Barre Coal Co. nuc. ttingham, yrnoids,	Totals,	Delaware and Hudson Co. mouth No. 2 washery. mouth No. 3 mouth No. 4 mouth No. 5,	Totals,	laware, Lackawanna and Western R. F. Co. oodward,	Totals,
	Occupations of Persons Employed Inside Occupations of Persons Employed Outside	Mine foremen  Mine foremen  Mine foremen  Mine bosses and assistants  Door-boys and fremen  Pumpmen  Door-boys and fremen  Company men  Door-boys and fremen  Miners' laborers  Company men  Douriside foremen  Miners' laborers  Company men  Door-boys and fremen  Miners' laborers  Company men  Miners' laborers  Company men  Miners' laborers  Company men  Miners' laborers  Company men  Door-boys and fremen  Occupations  Miners' laborers  Company men  Miners' laborers  Company men  Miners' laborers  Occupations  Miners' laborers  Occupations  Miners' laborers  Occupations  Miners' laborers  Miners' laborers  Occupations  Miners' laborers  Miners' laborers  Occupations  Miners' laborers  Miners' laborers  Occupations  Miners' laborers  Occupations  Miners' laborers  Miners' laborers  Occupations  Miners' laborers  Occupations  Miners' laborers  Occupations  Miners' laborers  Occupations  Miners' laborers  Miners' laborers  Occupations  Miners' laborers  Occupations  Miners' laborers  Occupations  Miners' laborers  Miners' laborers  Occupations  Miners' laborers  Occupations  Miners' laborers  Occupations  Miners' laborers  Occupations  Miners' laborers  Occupations  Miners' laborers  Miners' laborers  Miners' laborers  Occupations  Miners' laborers  Occupations  Miners' laborers  Miners' labor	Occupations of Persons Buployed Collections of Persons Buployed County  Minkesserver Coal Coal Coal Coal Coal Coal Coal Coal	County  County	Occupations of Persons Employed Inside   Occupations of Persons Employed Country   Occupations of Persons Employ	Occupations of Persons Employed Inside   Occupations of Persons Employed Collectes and Collectes and Collectes and Collectes (new)   Occupations of Persons Employed Inside   Occupations of Persons Employed Collectes and Collectes (new)   Occupations of Persons Employed Collectes and Collectes (new)   Occupations of Persons Employed Collectes and Collectes (new)   Occupations of Persons Employed Collectes and Collectes (new)   Occupations of Persons Employed Collectes and Collectes (new)   Occupation	Occupations of Persons Employed Inside   Occupations of Persons Employed Collieries   Occupations   Occupations of Persons Employed Collieries   Occupations of Persons Employed Collieries   Occupations of Persons Employed Collieries   Occupations of Persons Employed Collieries   Occupations   Occupations of Persons Employed Collieries   Occupations   O

\*Employes included in other collieries.

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1,058	1,312	673	1.626	范音	72	144	111		26	151	11,483		2, 578 2, 538 1, 834 1, 912 1, 912 1, 912 1, 414 114 11, 433
319	419	43	7.5	65	6	116	623	8	5	1 2	3,147	1	671 733 733 734 735 736 736 737 731 731 731 731 731 731 731 731 731
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Luzerne, Luzerne,		Luzerne. Luzerne,		Luzerne, Luzerne,		Luzerne,	Luzerne,	Luzerne,	Luzerne,	Luzerne,			Luzerne, Luzerne, Luzerne, Luzerne, Luzerne, Luzerne, Luzerne, Luzerne, Luzerne, Luzerne, Luzerne, Luzerne, Luzerne, Luzerne, Luzerne, Luzerne,
No. 2 collbery, Gayberd,	Totals,	Parrish Coal Co. Parrish, Puttonwood,	Tetals,	West End West End Coal Co. West End washery.	Totals,	Plymeath Cal Co. Dodson,	George F. Lee Coal Co.	North American Ceal Co. Plymouth washery,	Old Plymouth Coal Co. Old Plymouth washery,	West Nantiwoke Coal Co. Washery,	Grand totals,		Lehigh and Wilkes-Barre Coal Co., Delaware and Hudson Co., Delaware, Lackawanna and Western F. R. Co., Fingston Coal Co., Parrish Coal Co., Parrish Coal Co., Plymouth Coal Co., Plymouth Coal Co., Old Plymouth Coal Co., North American Coal Co., North American Coal Co., West Nanticoke Coal Co., West Nanticoke Coal Co., West Nanticoke Coal Co., Totals,

Location and Wilkes-Barre Coal Co.   Luzerne,   5 2 13 561 638 246 74 7 256 89 1.871   5 13 7 1 20 1.871   5 13 7 1 20 1.871   5 13 7 1 20 1.871   5 13 7 1 20 1.871   5 13 7 1 20 1.871   5 13 7 1 20 1.871   5 13 7 1 20 1.871   5 13 7 1 20 1.871   5 13 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8	2,57	2,500		1,83	1.31	1,62	2	4.4	11	1,5	Z.	18	11, 433	
Co.         Luzerne, Luzerne, 2         4         6         15         454         234         81         229         144         1,9%         7         90         217         90         11           Co.         Luzerne, 2         4         2         11         452         435         145         72         14         2%         89         1,464         5         23         7         201         128         8           Luzerne, 2         4         2         11         45         435         145         72         14         2%         89         1,464         5         25         15         10         138         8           Luzerne, 2         4         2         1 <t< td=""><td>671</td><td>(1) (1)</td><td></td><td>380</td><td>40.9</td><td>707</td><td>51.01</td><td>146</td><td>539</td><td>90</td><td>1-</td><td>12</td><td>3,157</td><td></td></t<>	671	(1) (1)		380	40.9	707	51.01	146	539	90	1-	12	3,157	
Total Co. Luzerne, 5 2 13 561 638 246 74 7 236 89 1.871 5 13 7 201 138 8 8 8 1.871 5 14 1.9%    Co. Luzerne, 4 2 11 452 435 145 72 14 230 89 1.454 1.9 15 13 15 10 10 138 8 1 10 10 10 10 10 10 10 10 10 10 10 10 1	000	2.1×		191	135	1.8	163	46	0.1	40	57	10	1,326	
To Coal Co. Luzerne, 5 2 13 561 638 246 74 7 236 89 11.871 5 2 13 601 638 246 74 7 236 89 11.871 5 2 13 10 10 10 10 10 10 10 10 10 10 10 10 10	11	s		10	00	5.	c.1	e i		-	_	-	1	
Co.         Luzerne, Luzerne, 1         4         6         19         685         484         224         81         22         226         144         1,665         89         1,871         4         28         7           and Western         Luzerne, 3         1         561         638         246         74         7         236         89         1,871         5         23         7           Luzerne, 1         2         1         45         43         145         72         14         270         89         1,644         2         23         215         60           Luzerne, 1         1         3         18         27         148         76         46         149         17         236         235         23         16         37	98	128		13		6.2	11	9	00		6.	:	350	
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Ter Chal Co., Luzerne, 5 2 13 651 638 246 74 72 228 144  Co., Luzerne, 4 2 111 452 435 145 77 149 28 89  Luzerne, 2 4 3 11 452 435 145 77 149 64 184  Luzerne, 1 3 1 180 180 64 17 2 29 15 19 19  Luzerne, 1 1 3 1 180 180 64 17 2 29 15 19 19  Luzerne, 1 2 1 180 180 64 17 2 29 15 19  Luzerne, 1 1 2 1 180 180 64 17 8 6 184  Luzerne, 1 2 2 18 18 18 18 8 18 8 18 8 18 8 18		:			_	50	c1		:	:	<b>—</b>	:	00	
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re Coal Co. Luzerne, Co. Luzerne, Luzer	- 9	21		c.)	:	4	c1	-	:	:		:		
co. Tre Coal Co	Ą	S		-di	83	¢1		-	=	:	,-1	:	83	
Lehich and Wilkes-Barre Coal Co Delaware and Hudson Co Delaware Lackawanna and Western R. R. Co Kingston Coal Co West End Coal Co West End Coal Co North American Coal Co South American Coal Co George F. Lee Cail Co George F. Lee Cail Co Old Plymouth Coal Co West Nanthooke Coal Co West Nanthooke Coal Co	Luzerne,	Luzerne,		Luzerne,	Luzerne,	Luzerne,	Luzerne,	Luzerne,	Luzerne,	Luzerne,	Luzerne,	Luzerne,		
	Lebigh and Wilkes-Barre Coal Co	Indaware and Hudson Co.,	Delaware, Lackawanna and Western	R. R. Co.	Kingston Coal Co.	Parrish Coal Co.	West End Coal Co.	Plymouth Coal Co.	George F. Lee Coal Co.	North American Coal Co.,	Old Plymouth Chal Co.,	West Nanticoke Coal Co.,	Totals,	

TABLE 3-Continued

		243 231 240	241	186 266 259 249	240	209	203	264	225	227
	Totals								_	
	December	15.6 16.2 14.6 16.9	15.8	20 19.6 19.4	19.7	16.2	15.5	18,	14.9	14.9
	November	15.7 16.1 14.4 15.6	15.5	26.17 26.17	20.9	14.8	14	19.5	14.9	15.3
aker	TedotoO	20.3 20.4 17.5 19.9	19.5	6.5 14.8 15.2	12.9	4.7	6.2	12 10.6	11.3	18.9
Number of Days Worked Each Month in Breaker	September	20 13.4 13.6 20	18.3	15.6 19.4 20.5 19.1	18.7	17.	17.6	20.5	18.5	20.3
ch Mont	tsuguA	16.7 22.9 19.6 19.8	19.8	14.7 24.8 20.6 20.5	20.1	22.53	21.9	23.5	19.8	18.9
ked Eac	luly	2002 4.002 20.02 20.171	2).1	1288.1 1.6 1.6	5.11	21.3	61	16.5	19.8	18
ys Wor	nue	21.5 22.8 20.4 20.9	21.4	23.8 24.6 21.3	13.4	21.5	61	24 16.5	20.3	19.6
r of Da	Мау	20.4 19.4 20.6	30.6	15.25 1.25 1.25 1.55	20.5	17.7	19.1	22	19.8	18.3
Numbe	lingA	21.2 20.2 21.2 21.4	21.2	14.7 23.33 2	21.2	21.9	21.7	24.5	20.8	18.5
	Матећ	24.5 24.6 21.6		20.2	21.8	13.2	11.5	26.5 19.5	9	1.3.1
	February	22 22 22 23 24 24 24 24 24 24 24 24 24 24 24 24 24	21.3	20.5 20.5 20.5	22.1	17.5	16.7	23.5	19.4	19
	January	24.6 23.1 24.7 24.7	24.5	26.6 26.6 27.7 23.6	56	23.7	14.8	27	22.8	£1
	County	Luzerne, Luzerne, Luzerne, Luzerne,		Luzerne, Luzerne, Luzerne,		Luzerne,		Luzerne,		Luzerne,
	Names of Operators and Collieries	Lance, Nottingham, Reymolds, Wanimie,	Averages,	Delaware and Hudson Co. Plymouth No. 2, Plymouth No. 3, Plymouth No. 4 and 5, Boston,	Averages,	Delaware, Lackawanna and Western R. R. Co. Woodward, Avondale,	Averages,	No. 2 colliery, Gaylord, Gaylord,	Averages,	Parrish, Parrish Coal Co.

Luzerne, 3 18.7 27 19 18 20.4 19 18.2 18.5 18.5 18.1 15.4 227 227 227 22.5 18.9 22.5 18.9 18.9 18.5 18.5 18.5 18.5 18.5 227 227 227 227 227 227 227 227 227 22
24.3 20.8 22.7 19.5 18.1 20.8 18.4 21.8 19.3 20.3 18.3 17.4
Luzerne, 18.1 16.4 18.4 20 17.9 20 17.9 16.4 18.2 19.0
21.7 16.1 16.3 15.5 12.5 14.2 15.9 12.1 8.8 9.7 9.9 11.6
21.8 19.1 19.2 19.8 18.5

TABLE 3-Recapitulation

TABLE 4.—Eighth Anthracite District, 1903 Fatal Accidents in and about the Mines

Nature and Cause of Accident in Brief	Squeezed between car and prop while making flying switch. Died at home January 26. Fell down shart and was instantly killed. Kicked on the head by a mule. Died Jan-	uary 30. Fell down shaft and was instantly killed. Killed by a mule falling on him. Instantly killed by a piece of coal striking	him on head from a blast. Killed by being squeezed between loaded	된 금도	Died fellowing day at hospital. Instantly killed by a fall of top coal. Fatally injured by a fall of top rock.	Fatally injured by cars at foot of rock	Instantly killed by fall of rock. Fatally injured by being squeezed between	loaded car. Died April 18. Instantly killed by a fall of rock. Died	XH	screen. Fatally injured by a spark dropping into a keg of powder. Died May 30 at hospital.
County	Luzerne, Luzerne, Luzerne,		Luzerne,	Luzerne, Luzerne,		Luzerne,	Luzerne, Luzerne,	Luzerne,	Luzerne Luzerne,	Luzerne,
Name of Colliery	Nottingham,		Nottingham,	No. 3 shaft, Kingston, Wanimie 18,	Nottingham, Buttonwood,	West End,	No. 3 shaft, Kingston, Nottingham,	No. 3 shaft, Kingston,	No. 2 shaft, D. & H., Avondale,	Lance,
Number of orphans			. :	co e3 e3	:	67	4 :	2		:
Married or single	<u></u>	M. 1.	:: :i:	K. K.	S. M. 1	M. 1	S	M. 1	::: ::::::::::::::::::::::::::::::::::	M. i 1
98A		355	15	35 T	26 26	24	36 7	29	27	E
noilsquooO	Slopeman, Footman,			Miner,  Miner,	Laborer,	Trackman,	Miner,	Miner,	Laborer, Breaker swpr.	Miner,
Nationality	Welsh,	English, American,	American,	Welsh, English,	Polish	American,	American,	Irish,	Irish, English,	Lithuanian,.
Name of Person	David Roberts, George Machinski, Edward Hagle,	Samuel Honey, David R. Dare, Andrew Kondrack,	Reese Owens,	David J. Williams, Samuel Rogers,	Edward Katoski, Richard M. Davis,	Leslie Nuss,	Samuel Moreland,	John McGlynn,	John Ward,	John Piavitch,
Date of accident	22 888 888	10 e 3	ch 4	H 218	1 9	13	16	23	13	62
	Jan.	Feb.	March		April				May	

Instantly killed by falling down shaft. Fatally injured by a fall of coal. Died June 6. Instantly killed by a fall of top coal. Instantly killed by a fall of top rock. Fatally injured by tween door and loaded coars. Died June 24.	Killed by a fall of rock. Killed by a fall of code. Instantly Killed by premature blast. Instantly Killed by praced cars becoming devailed, crushing him. Instantly Killed by a fall of top rock in	the shape of a bell.  Instantly killed by a fall of top rock in the shape of a bell.  Instantly killed by a trip of ears while in the act of crossing slone.	Fatally injured by an explosion of gas. Died October 7. Instantly killed by a fall of coal. Instantly killed by a premature blast. Fatally, injured by a a nul of coal from rib.	Partally injured by an explosion of gas. The December 25 at hospital. Instantly killed by being squeezed between loaded car and rib.
Luzerne, Luzerne, Luzerne, Luzerne, Luzerne,	Luzerne, Luzerne, Luzerne, Luzerne, Luzerne,	Luzerne, Luzerne,	Luzerne, Luzerne, Luzerne,	Luzerne, Luzerne,
Welsh,         Co. man,         22         S.	1 Woodward Lazerne, 1 Parinsh, 1 No. 3 shutt, D. & H. Lazerne, 1 No. 3 shatt, Kingston, Lazerne, 1 No. 5, D. & H., Lazerne,	Mo. 5, D. & H., Luzerne, West End, Luzerne,	Drattiveman, 38   M. 1   3   Avondale,   Luzerne,   Miner,   28   S.     Wangande No. 19   Luzerne,   Miner,   22   M.   1   No. 5   D. N. H.   Luzerne, Laborer,   23   S.   No. 5   D. N. H.   Luzerne,   Laborer,   25   S.   No. 5   D. N. H.   Luzerne,   Laborer,   25   S.   No. 5   D. N. H.   Luzerne,   Luzerne,   Luzerne,   D. N. H.   Luzerne,   Luzerne,   D. N. H.   Luzerne,   D. N. H.   Luzerne,   D. N. H.   Luzerne,   D. N. H.   Luzerne,   D. N. H.   Luzerne,   D. N. H.   D. N. H.   Luzerne,   D. N. H.	Polish, Laborer, 25 M. 1 1 Nottingham, Luzerne, American, Driver, 19 S Parrish, Luzerne,
H44		. 4	60 ::::	19   S   Par
	=== =	-		
SS SEE	HANN A	Y. K	N N N N	N Si
118 843 	#854 <b>%</b>	위 무 	% %88	-: -: -: -: -: -: -: -: -: -: -: -: -: -
Co. man, 29 S. Laborer, 30 M. M. Co. man, 65 M.	Welsh,         Minor.         40         M.         1         4           Polish,         Lishoper.         33         M.         1         1           Prish,         Minor.         33         M.         1            American,         Runner,         15         5.             American,         Minor,         66         M.         1	Polish, Laborer, 29 S		Laborer,
Welsh, Polish, Polish, Italian, American,	Welsh, Pollsh, Irish, American,	Polish, Italian,	Welsh, Italian, Irish,	Polish,
Koman Lauring   Roman Lauring   Adam Jadamis,   Mario Profire   David Davis,	Thomas Pugh, John Newzavich, Madnael Wright, John Straud,		Thomas Anthony,  Abel Reagan, John P. Burke, Joseph Herman,	
84 605	8 ET 8	32 8	8 22 3	21
June	July Aug.	Sept.	Oct.	

Non-Fatal Accidents in and about the Mines TABLE 5.—Eighth Anthracite District, 1903

Nature and Cause of Accident in Brief	Burned on hands and face by an explosion of gas. Skull fractured and jaw broken by being run over by landed car. Cut on hand by a piece of coal falling from a car. Foot crushed by cars.	List his eye; injured while driving spike, index miger of right hand severed by loaded car.  Back and lies bruised; also, arm broken by being run over by empty car.  Burned on hands and face by charge of powder.  Thirth bruken by cage striking bottom of Arm broken by playing.  Head injured and foot dislocated by a fish of row, and foot dislocated by a Two, fingers severed by car leaving track.	and rechined.  Blurned on hands and face by an explosion of gas, Two ribs fractured by flying coal from a blast.  Two fingers severed by flying coal from a blast.  Leg broken by a fall of rock.  Leg broken by a fall of rock.  Leg broken by a fall of rock.  Head injured by falling off a trip of cars.  Arm broken; squeezed between car and prop.
County		Luzerne, Luzerne, Luzerne, Luzerne, Luzerne, Luzerne, Luzerne,	Luzerne, Luzerne, Luzerne, Luzerne, Luzerne, Luzerne, Luzerne,
Name of Colliery	Nottingham,	Woodward, Gaylord, Woodward, No. 1 shaft. No. 2 colligry, L. and H. Parrish, Chauncey, No. 2, D. and H.	Woodward, Lance, No. 2, D. and H., Wanamie, No. 3, D. and H., No. 3, D. and H., Parrish,
Married or single	H H w win	S SE SE SE SE SE SE SE SE SE SE SE SE SE	ZN www w ZZ
98A			£4. 6 8. 4. 6 4. 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6
noithagussoO -	Miner, Driver, Driver, String man	Miner, Laborer, Miner, Miner, Slope man, Driver, Rock dumper,	Miner, Miner, Slopeman, Laborer, Laborer, Miner, Company laborer, Driver boss,
Vationality	Lithuanian, American, Polish,	Polish, Ruesian, Welsh, American, American, Polish,	Polish  English  American,  Polish,  Welsh,
Name of Person	William Suproam, Thomas Williams, Stanley Bazziwiski, Richard H. Jones, Rohan Nolan	John Kosguski,  George Raffle, William Jones, John Brogan, Samuel Peters, James Duffly,	Frank Wolkofski, Henry Lewis, Thomas Condon, John Swales, Stanley Osew, John Wargo, William J Owens,
Date of accident	Jan. 3 5 10 10 10 133	14 20 20 28 28 <b>Teb.</b> 31 7	12 12 17 18 18 20 20 80 March 9

Injured on chest, pelvis and ribs by a fall of loney.  Leg injured by car running over it.  Hand injured by car running over it.  Energy of gas.  Right foot injured by a fall of coal.  Burned on hands and face by an expured on hands and the by an exhibit of injured by a fall of coal.	Left arm broken; caught by pinjon wheel, it hands and face harmed by an explosion of gas. Hand injured; finger severed by ent. Ribs and codar hone broken; sque-ged by tween car and rib.  (The object of the property of the plant hand has a from blast.	Leg fractured by falling off a car. Shoulder blane broken; sque zed between our and prop. Right nicked dishocated by being litt with plane none	Face injured; kicked by a male, Practure of check bone; struck by coal from blast,	Right arm broken by feilling out of wagon. Arm broken by feilling off a mule, Log broken by a fail of eatl. Log broken by heing run over by a car, while playing,	Left werst dishorated by fading on chute. Burned on lace by gas, Singerzed about body between car and rib. Burned on hands and face by an explesion of gas.	Burned on hands and face by an expicsion of gas.  Arm breken by being squeezed between ear and mean	Leg bruised by ash eart ramins over it.  Burnel by ages on shoulder.  Cut on head and face by permuture that.  Cut on bead, also shoulder buttered by a full of too slate.	Log broken; struck by an iron bor.  Two fingers severed by hobig caught between latches and ear.  Thigh fractured by collar failing on him (tit on head and hip batised by fail of the collar by the fail of the collar by the lates.)	James Protectured by being struck with rest rath.  New broken and jaw bruised by a full of rock.
Luzerne, Luzerne, Luzerne, Luzerne, Luzerne, Luzerne,	Luzerne, Luzerne, Luzerne, Luzerne, Luzerne, Luzerne,	Luzerne, Luzerne, Luzerne,	Luzerne, Luzerne,	Luzerne, Luzerne, Luzerne, Luzerne,	Luzerne, Luzerne, Luzerne, Luzerne,	Luzerne, Luzerne,	Luzerne, Luzerne, Luzerne, Luzerne,	Luzerne, Luzerne, Luzerne, Luzerne,	Luzerne, Luzerne,
Buttonwood, Woodward, No. 4 shaff, D. and H Lanre, Lanre, Buttonwood, Avondade,	No. 2. D. and H., No. 3. D. and H., No. 3. D. and H., Buttonwead, Chauneey, No. 3 shaft, Kingston,	Nottingham,	Boston, No. 2 shaft, Kingston,.	Gaylord, Parrish, Nottingham, Boston,	Wanamie, Wanamie, Wanamie, Woodward, Codward, onwood,	Gaylord, Nottingham, No. 2, D, and H.	Lance. Avondale,  No. 2. D. and II.	Nottingham, Boston,	
EZZENE E	R REER'S	E ZE	N.S.	ivEvE	જ જ જ જ	. v.	z x x x	KK KS	M M
4 86577584	S1225 E1	13 31 - 53	19	2252	151831	E 81	13 % 51 75	\$5 S2 12 S5	36
company miner, Stroman, Draver bess, Mine foreman, Five boss, Miner, Miner,	Slate boss, Laborer, Laborer, Laborer, Miner,	Driver, Min-r. Rock loader,	Car oiler,	Teamster,	Slate picker, Miner, Driver, Brattleeman,	Miner,	Laborer, Miner, Laborer, Runner,	ltunner,	Laborer, Miner,
Welsh,	American, Shavonian, Lithuanian, Italian, Slavonian, Kalan, Slavonian,	Welsh, Lithuanian,.	Stavonian	Welsh, American, Lithuan, an, American,	Polish, American,	German, Irish,	Welsh, Polish, Russian,	English American, English,	Lithuanian.   Laborer, Slavonian, .   Miner,
Robert Thomas, Edward Williams, Jesch Lymchey, William E. Jones, John Bawden, Authony Zunk, Patrick Dunn,	Frederick Tulliver, Frui Temach, Adam Charkbock, Constant Benavige, Domnick Powletto, Nicholas Onko,	Charles Edwards, Adam Necr mas, John Williams,	Michael Pushkar, Mordecai Dando,	Thomas Brace, Joseph Pavidson, Michael Vitervage, Michael St. John,	P. ter Saloski, John Lobenski, Thomas Swanburns, Edward Davis,	James Gallagher,	pavid Lawrence, Peter Ceplas, Kzmofant Peternia, John Pritt leard,	Benjamin Stade, Edward Wicklam, Alfred Cherritt,	
1 22.000	H 31 31 31 31 31	88 5	616	중인사업	15 th to 7	11	2223	1818 St 18	
April	12—1903			May	June			Tuly	
20—	12—1903								

TABLE 5-Continued

Nature and Cause of Accident in Brief	Kicked by a mule,  Burned on hands and face by an explosion of gas,  Injured by fall of rock, Leg broken by a fall of top slate while	setting prop.  Leg broken by a fall of top slate while wedging prop.	Squeezed between a derailed car and rib. Burned by powder. Arm broken by a piece of coal falling out	Tirm Jace 1 and 1	against him. Leg broken h. Both ankles dislocated by a piece of coal.	falling against him. Cut on shoulder by a piece of top slate. Back injured by cars. Cut on head and face by a premature	blast. Foot curshed by machinery. Thigh broken; hit with piece of coal from	Leg broken by derailed car. Leg broken: squeezed between cars. Leg broken: kfoked by a mule. Out on bead and leg by a fall of top slate. Hip dislocated by fall of coal.
County	Luzerne, Luzerne, Luzerne, Luzerne, Juzerne, Luzerne,	Luzerne,	Luzerne, Luzerne, Luzerne,	Luzerne, Luzerne, Luzerne, Luzerne,	Luzerne, Luzerne,	Luzerne, Luzerne, Luzerne,	Luzerne, Luzerne,	Luzerne, Luzerne, Luzerne, Luzerne,
Name of Colliery	Woodward, No. 2. D. and H., No. 2. D. and H., No. 2. D. and H., No. 2. Swatt, Kingston, Nottingham,	Lance,	Reynolds, Boston, Nottingham,	Nottingham, West End. Nottingham, No. 3 shaft, Kingston,	No. 2, D. and H., No. 2, D. and H.,	Woodward, Parrish, Parrish,	Woodward,	Woodward, No. 2, Kingston, Lance, No. 3, D, and H. No. 3 shaft, Kingston,
Married or single	KKKKKW	X.	w K w	Kwww	Κ̈́S	W.K.K	ww	KWWKW
93Å	118 336 36 30 30		42 43 45 45 45 45 45 45 45 45 45 45 45 45 45	22228	00 01	42 24 36	37	17 23 40 40 40 40 40 40 40 40 40 40 40 40 40
noi3squooO	Driver, Rock miner, Rock miner, Miner, Miner,		Driver, Miner, Miner,	Footman, Headman, Laborer, Laborer,	Laborer,	Miner, Driver, Miner,	Breaker boss,	Driver, Car coupler, Driver, Miner,
Nationality	Pelish, German, Welsh, German, Polish,	Polish,	American, Welsh, Polish,	Polish, Felish, Lithuanian, Polish,	Polish,	Polish, Welsh, Russian,	American, Polish,	Welsh, Russian, American, American,
Name of Person	Stanley Syneck, Henry Birkenstock, Thomas Davis, James Cool, Joseph Wydra, Watsell Dargell,	Jacob Zoranski,	George Kowlands, John Stevens, Michael Sheokoski,	George Scotty, John Loshinski, Joseph Pascal, Frank Tanza,	William Piavitch, John Romanski,	Frank Salvage, Richard Jones, Michael Lasnick,	David Williams, John Shumack,	William Richards. Michael Nicovitch, Oliver Reese. James Monahan, Frank Oravish,
Date of accident	188 188 128 128 128 128 128	23	2.02 4.02 8.04	Aug. 1	L~ t~	133	Sept. 2	17 00 00 TU

Right leg crushed, trying to adjust belt while engine was in motion. Induced by permature blast. Squeezed by falling under loaded cars. Burned on hands and face by explosion of gas. Hand crushed; while in	Dody introd by premature blast, Lost broken by fall of ceal, Body injured; fell from seaffold. Arm broken while side broking car, I'wo ingers severed while cleaning blast- ing barnel, and fare by explosion Durrod on hands and fare by explosion	Leg breken by fall of rock.  Log amputated; was run over by leaded  ear.  Finger severed by slipping an lump of	lead to the state of the state	Arm broken; caught between door and Leg hoven by a fall of roak.  Leg hoven by a fall of roak, and explosion of gas, but no scraper line, but however, fell into scraper line.  Arm broken; hit by lover, and of rock, Rundure, itt by spark all of rock.  Rundure, itt by spark all of rock.  En rocken while unloading pipe from Leg trooken.	wagon. Loss Doigen; caught between car and pulley on slopeBurned by an explosion of gas. Ribs fractured by a fall of rock, Kicked by mule and fell under car. Burned by an explosion of gas. Endy injured by premature blast.
Right leg while en while en larjuned by Squeezeed larjuned o larjuned o of gas. Hand eru	Eady injured Leg broken I Body injured Arm broken Two ingers ing barred	of gas. Leg broker Leg ampu car. Finger ser	coal.  Leg broken by trip on slope.  Arm amputated	Arm broken; slam post, Leg broken by Burned on ha ston of gas, Ston of gas, Body injured; Arm broken; h Loft thigh fra Englith injured; Leg broken w	Wagon, Lwagon, Lwagon, Julley on shepe. Burned by an ex Ricked by mules Burned by an ext Burned by an ext
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Woodward,	Wanamie, No. 5, D. and H., Nyuamie, No. 5, L. and H., No. 3, D. and H., Lance,	Wantimie, West End, No. 5, D. and H.,	Nottingham,	Partish, Partish, Partish, Lahre, Lahre, Avondale, Avondale, Woodward, Boston,	Dodson, Nottingham, Nottingham, Nottingham, Nottingham, Nottingham, Not staff, D, and H. Avondalat West End, Gaylord,
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American, Lithuanian., Polish, Russian, Kussian, American,	American, Slavonian, American, Slavonian, Slavonian, Lithuanian,	Slavonian, American, Russian,	Pelish,	American, Slavonian, Slavonian, Slavonian, American, American, Slavonian, Welsh,	Irish, Polish, Polish, Polish, Polish, Irish, Irish, Austrian, American, Italian, Polish,
26 Joseph Morris,  Stanley Carter,  Stanley Barron,  Frank Zwyky,  John Shokoski,  Isaue Eddy,	Nelson Ogen, Michael Fligler, John Dugan, Thomas Manning, Andrew Lasee, William Baredulis,	Joseph August, Frank Allen, Joseph Push,	Michale Bolica,	John Mills.  Partiel Blakelle. Joseph Domannkle. Joseph Close. Gerge Brrgentas. Walter Lores. Michael Kutcher. David D. Thomas,	James Simmons,  John Purner, Michael Reyeski, Martin Stafauski, James Brace, John Wisen, John Wisen, Martin Wildes,
26 26 5 5 5 5 5	25 25 25 50 50 50 50 50 50 50 50 50 50 50 50 50	9 11	16	44400 N N N N	22222222
oct.	Nov.			Dec.	

Fatal Accidents-By Falls of Coal, Slate and Roof.

David J. Williams, miner, was fatally injured March 11, by a fall of rock in Orchard vein No. 3 shaft, Kingston. He was in the act of barring down some top rock and while so doing a large piece fell on him and crushed him.

Samuel Rogers, miner, was instantly killed March 12, by a fall of rock at Wanamie. He was robbing pillars in the Ross vein. The place was well timbered, but a piece of rock fell from within a small enclosure of two props and killed him.

Edward Katoski, laborer, was instantly killed March 23, by a fall of top coal in Red Ash vein of Nottingham colliery. Two large slips running in opposite directions and ending at the same point in the roof fell, displacing about six sets of timber. The victim and his miner were tamping a hole in the face of chamber when the fall occurred. The miner fortunately escaped with a slight injury.

John Nowzavich, miner, was fatally injured by a fall of coal in Bennett vein, Parrish colliery, July 6. The miner in the next chamber notified him that they were about to fire in the cross-heading. The victim retreated to the foot of chamber, but through some unaccountable manner went back to the face of chamber, just as the shot went off. A large piece of coal fell from the rib, due to a slip, and pinned him against the car. The crosscut had several yards to go before breaking through.

Joshua Steever, miner, and Peter Cook, laborer, were instantly killed by a fall of rock in Red Ash vein No. 5, Delaware and Hudson Company, August 26. Steever was known to be a very careful miner and a most practical one. He had just fired a blast in the top bench in the left corner of his chamber. The driver was waiting on the branch to take him up an empty car. Both men were engaged in cleaning some coal off the road when a fall of rock occurred. The rock which approximately weighed about 100 tons was in reality a geological freak. It resembled the stump of a giant tree with its vast roots shooting out in every direction while on top marks plainly visible of branches as large as ordinary sized trees lying zigzag. The rock fell due to a slip almost circular in shape.

Adam Jadamis, laborer, was instantly killed June 5, by a fall of coal in Red Ash vein, Woodward colliery. The top coal was full of slips and the chamber was double timbered and lagged, but the miner apparently did not realize the condition of the roof, and permitted himself to drive a considerable greater distance between the last set of timber and the face of chamber.

Mario Profire, miner, was instantly killed June 6, by a fall of rock at West End colliery. He had fired a blast which knocked out a set

of timber when a fall of rock took place. While cleaning this fall a second one occurred, with the above result.

Thomas Pugh, miner, was instantly killed June 20, by a fall of rock in the Bennett vein, Woodward colliery. He realized that a loose piece of rock between the mining bench and top coal was treacherous. His laborer told him that while he would be drilling the hole underneath it there would be danger of it falling on him, but he thought differently. While he was in the act of driving in the machine bar it shook the piece of rock loose and it fell upon him.

Richard M. Davis, miner, was fatally injured April 9 at Buttonwood mine of the Parrish Coal Company, Kidney vein. He was in the act of digging a hitch in the bottom in order to set a prop when a piece of fire clay fell upon him. He had instructed his laborer to keep his hand on the rock and in case of any danger to shout. It certainly was a mistake in not barring down this piece of rock previous to his digging a hitch directly underneath it.

Samuel Moreland, miner, was instantly killed April 16, at No. 3 shaft, Kingston, in Orchard vein. He realized the top rock was bad and had set a prop within a few feet of the face of his chamber, but a fall of rock occurred between the prop in the face and another prop that stood back a considerable distance.

John McGlynn, miner, was fatally injured April 29, by a fall of top rock at Kingston No. 3 shaft. He was working on the night shift and had fired his last shot which knocked out a prop. He proceeded to reset it when the rock fell.

Roman Lauring, was fatally injured June 4, at Boston mine, in Red Ash vein by a fall of top coal. He was undermining the bottom bench when a piece of top coal fell out against him.

Abel Reagan, miner, was instantly killed October 13, by a fall of coal in the Bennett seam at Wanamie colliery. He was working in close proximity to the outcrop. His coal seemed to be in layers or slips two or three feet apart across the entire width of his chamber. He tried to bar down a piece of the top bench, but failing to accomplish his task he proceeded to drill a hole beneath it when the top coal fell upon him.

Joseph Herman, laborer, was fatally injured December 1, in the Red Ash vein No. 3, Delaware and Hudson. The colliery was working half days. His miner went home at 11.40 A. M., leaving the victim to load the last car. While doing so a large lump of slate and coal slid from rib and pinned him to the car. How he managed to extricate himself from so narrow a space is a miracle, or how long he worked to free himself no one knows. However he proceeded back to his box, secured his overcoat, threw it over his shoulders, returned to the fact of the place he was working, adjusted his shovel against the rib for a head rest and laid down. He was discovered dead at 12 o'clock midnight by employes of the colliery who went in search for him.

# By Cars

David Roberts, slopeman, was fatally injured January 23, at Nottingham colliery. He was endeavoring to make a flying switch on the head of the Ross slope with an ash car.

Reese Owens, driver, was fatally injured March 4, by being squeezed between loaded cars and rib in Nottingham colliery, Red Ash vein. He was coming out of gangway seated on the head end of a loaded car engaged in conversation with the runner who occupied the other bumper, when the accident occurred.

Leslie Nuss, trackman, was fatally injured April 13, in Red Ash vein, West End colliery. He was engaged in tending foot of Rock plane. A loaded trip became derailed at the latches while descending and he ran out of the safety hole to signal the engineer to stop, when he was caught between the trip and rib.

Michael Washilision, driver, was fatally injured April 17, at Nottingham colliery. He was endeavoring to unhook his team from a loaded trip. His team not giving him sufficient slack, he continued in this manner until he was caught by both trips.

John Ward, laborer, was instantly killed May 12, by a runaway trip of cars in Red Ash vein No. 2 colliery, Delaware and Hudson Company. He was laboring in slope airway. They pulled his loaded car out by tail rope. Ward was in the habit of hooking and unhooking the tail rope at a point where it was convenient for the main slope trip to be coupled to the car. He stood out on the main slope while the trip was descending. A coupling broke allowing two cars to run back which caught him against the pillar.

David Davis, laborer, was fatally injured June 15, in Red Ash vein, Boston colliery, Delaware and Hudson Company. He was tending two doors in close proximity to each other. While in the act of opening his second door he was run down by a loaded trip. The per cent. of grade was very small. The supposition is that he permitted the trip to get too close to him before he opened door No. 1.

John Straud, runner, was instantly killed August 24, at No. 3 shaft, Kingston. He was riding down a counter on the headend of a loaded trip, his lamp went out, and it was thought that he fell off and the trip passed over him.

Dante Vitalli, laborer, was instantly killed September 3, at West End colliery. He was on his way home and had walked up the manway with others. At a point 30 feet below the apex of main slope he proceeded to cross when he was hurled to one side by an ascending loaded trip.

Albert Hussey, driver, was instantly killed December 24, in Bennett vein, Parrish mine. It is supposed that in attempting to get on the head end of a loaded ear, which his team was pulling out of a chamber branch, he lost his hold and came in contact with a close rib and car.

# By Powder

John Piavitch, miner, at Lance, was fatally burned by a spark dropping into a keg of powder causing an explosion. He died at the hospital on May 30. I have frequently called attention to the danger of making cartridges of powder while the naked lights are on their heads, and have positively prohibited them under penalty of the law from so doing, but a wonderful amount of carelessness exists among the men in this respect.

#### By Cars—Outside

Andrew Bradcock, loader, was running a 100,000 capacity steel car under the breaker in No. 2, Delaware and Hudson Company. He jumped off the rear end of the car, and running on the platform endeavored to jump on the side of the car to get inside. He was caught by the timber that supports the pockets, and so badly squeezed that he died the following day at the hospital.

# By Machinery—Outside

William Wilson, breaker-sweeper, at Avondale, was found dead under the screen by one of the slate picker boys. No one was able to tell how he was caught by revolving screen. It was stated at inquest that his work did not call him there at that particular time. The screens were protected. The manner in which they discovered Wilson was, the coal had blocked up at the screen, and upon investigating they found his body directly underneath. He must have been killed instantly.

# By Premature Blasts

Andrew Kondrack, miner, No. 4 shaft, Delaware and Hudson Company, was working in a chamber on the pitch. He applied his lamp to the match and before he reached a place of safety the shot went off, one large piece of coal striking him on the head killing him. This is about the third time that Kondrack had been struck by flying coal from blasts. It was customary for him to retreat to a place where he could see the shot going off.

Michael Wright, miner, No. 3, Delaware and Hudson Company, was in the act of firing a blast, and before he could get away from the fact of his chamber, it exploded, killing him instantly. Wright was a miner of about 40 years experience.

John P. Burke, miner, No. 5, Delaware and Hudson Company, was driving a cross heading. He sent his laborer back with the tools and to warn the other men that he was about to fire. The laborer had just reached the chamber road and a very short distance below the cross-cut when the shot went off. Burke did not have the slightest chance to get away from the blast. He was most horribly mangled. He was known to be a very practical miner, the writer having known his serving in this capacity for 25 years.

# By Falling Down Shafts

George Machinski, laborer was engaged in tending foot of shaft. They had finished hoisting from the bottom or Red Ash vein and commenced to hoist from the Orchard vein. Machinski, with one other person, was engaged on one side of the shaft in handling empty cars, while two men were on the opposite side of the shaft running loaded cars on the cage. One car not running a sufficient distance on the cage, to enable the block to be properly adjusted, they called on Machinski who was pushing an empty car, to help adjust the one on the carriage. However, he continued to push his car to its place on the branch, during which time the men who handled the loaded cars properly placed the car on the carriage, gave the signal to hoist and returned to run in another loaded. In the meantime Machinski returning to the shaft and seeing the loaded car still standing on the cage thought it was not properly adjusted. He proceeded to place his back to the car and while in this position the cage was hoisted, permitting him to fall down the shaft when he was instantly killed. I would advise all foremen when they are short of foottenders not to substitute in their place men who are not acquainted with the handling of cars, but only those who are acquainted with this kind of work. It was very evident that Machinski was a stranger to this work.

Samuel Honey, miner, at G vein No. 2, Delaware and Hudson Company, was instantly killed February 3, by being crushed between cage and roof of landing. A cage load of men was about to be hoisted and he was the last man to step on. As he did so the cage was hoisted, crushing him against the roof of the landing. He fell down the shaft. At the inquest it developed that no signal had been given to hoist. This was sworn to by the boss foot-man and the men who were on the cage. The engineer, Charles Bittenbender,

swore that he received a signal, one whistle, to hoist coal. However, the jury placed the blame on the engineer.

William R. Jones, company men, at Nottingham, was killed May 28. He was on the night shift and with others was getting on the cage to be lowered, when in some unaccountable means the cage was hoisted, throwing Jones down the shaft, killing him instantly. It was stated at inquest that a cage load of men just hoisted to landing, and before they had an opportunity of stepping off, the night shift men crowded on. The head tender stated he saw some one through the rush take hold of signal wire. The engineer, John Davis, when sworn stated that he received a signal to hoist. The company was censured for not having appliances for return signals.

# By Explosions of Gas

Thomas Anthony, bratticeman, at Avondale, was fatally burned September 30, by an explosion of gas in fourth east lift, fifth slope, Ross vein. The colliery was idle on that date. Anthony was engaged in repairing main door on this lift. He went into the face of the gangway to borrow some tools. After he was through he returned them to the face, and on his way out on the main gangway road he ignited a small quantity of gas. He seemed to be burned slightly, but he died at his home on October 7.

Anthony Cominski, laborer, at Nottingham colliery, was fatally burned December 21, by an explosion of gas. He was engaged with four others in placing a truck of timber on the track in a chamber. A slight explosion of gas took place in the first chamber in the lift. In a short time the second explosion occurred in the chamber were Cominski and four others were engaged with the timber. The fireboss records showed that this last chamber was free from gas. It evidently appears that an accumulation of gas must have taken place in this chamber. The force of the first explosion dislodging it and carrying it down upon them. Cominski died December 26 at the hospital.

# By Mules

Edward Hagle, driver, No. 4 shaft, Delaware and Hudson Company, was kicked by a mule January 29, causing a fracture of the skull. He died at his home on the following day.

David R. Dare, doorboy, at No. 3, Delaware and Hudson Company, was riding on head end of loaded trip when team turned out, causing him to fall off. The hind mule fell on him and killed him.

#### Condition of Collieries

Nottingham colliery.—Condition good as to safety, drainage and ventilation.

Lance colliery.—Condition good as to safety, drainage and ventilation.

Reynolds colliery.—Condition good as to safety, drainage and ventilation.

Wanamie 18.—In safe condition; drainage and ventilation fair.

Wanamie 19.—Condition good as to safety, drainage and ventilation.

Plymouth No. 2.—Condition good as to safety, drainage and ventilation.

Plymouth No. 3.—Condition good as to safety, drainage and ventilation,

Plymouth No. 4.—Condition good as to safety, drainage and ventilation.

Plymouth No. 5.—Condition good as to safety, drainage and ventilation.

Boston.—Condition good as to safety, drainage and ventilation.

West End.-In safe condition; drainage and ventilation fair.

Dodson.—Condition good as to safety, drainage and ventilation.

Woodward.—Condition good as to safety, drainage and ventilation.

Avondale.—Condition good as to safety, drainage and ventilation.

Parrish.—Condition good as to safety, drainage and ventilation.

Buttonwood.—Condition good as to safety, drainage and ventilation.

Kingston No. 2.—In safe condition; drainage and ventilation fair. Kingston No. 3.—In safe condition; drainage and ventilation fair.

Gaylord.—In safe condition; drainage and ventilation fair.

Chauncey.—In safe condition; drainage good, ventilation fair.

#### IMPROVEMENTS DURING THE YEAR

DELAWARE, LACKAWANNA AND WESTERN RAILROAD COMPANY

#### Avondale Colliery

This mine was flooded during the year 1902. This great accumulation of water has now been pumped out and the pumps lost during the flood have been recovered.

#### Jersey Mine Fire

This most disastrous and serious underground conflagration is known to the people of this region from one end to the other, on which volumes could be written, giving the experiences that we have met with and the difficulties we have had to contend with in fighting this most dangerous enemy to the underground worker. I am glad to be able to report to you at this date that we are led to believe that we have succeeded in surrounding this affected district with incombustible material to prevent further spreading of the fire, and expect to be able to report in the near future that this destructive fire has been taken care of.

## Woodward Colliery

Outside.—The improvements at this breaker during the year consist of labor-saving machinery, automatic slate pickers, conveyors, elevators, shakers, etc., together with a 15-foot dust fan which is materially assisting in improving the conditions at this breaker.

Inside.—The installation of two  $7\frac{1}{2}$  ton electric locomotives, two electric hoists. Cooper and Abbot veins have been opened at No. 2 shaft, which will materially assist in increasing the output of this colliery in the future.

The condition of the colliery has been improved by a general cleaning up, white washing and painting of the buildings, on the outside, and the cleaning and ballasting of the roads on the inside.

#### DELAWARE AND HUDSON COMPANY

# Plymouth No. 2 Colliery

Reopening Hillman vein, repairs to No. 1 shaft, concreting, etc., making branches, etc., at foot of No. 9 plane; electrical machinery for lighting this division, buildings, etc., two large boilers added to the present boiler plant, extension of boiler house Hillman vein improvements; pump room and tunnel; additions to the washery, fifty new mine cars.

# Plymouth No. 3 Colliery

Tunnel from bottom to top split of Red Ash vein. Additional compressor with house additions, etc. Additional boilers; fifty new mine cars.

# Plymouth No. 4 Colliery

Mountain plane in the outcrop, conveyor for fuel to boiler house; fifty new mine cars.

# Plymouth No. 5

Fifty new mine cars; coal conveyor.

# Boston Colliery

No. 4 plane, bottom to top split Red Ash; one additional compressor; compressor house, addition to boiler house; rope haulage and extension, 100 new mine cars; chain hoist from tunnel to foot of shaft.

# LEHIGH AND WILKES-BARRE COAL COMPANY

## Lance Colliery

Outside.—Duplex air compressor, simple steam, compound air; forced fan draft system for boilers, and addition to new boiler house.

Inside.—No. 18 tunnel, Red Ash to top Red Ash, 15 yards. No. 19 tunnel, Red Ash to top Red Ash, 15 yards. No. 20 tunnel, Red Ash to top Red Ash, 15 yards. No. 21 tunnel, Cooper to Five Foot, 50 yards.

# Nottingham Colliery

Outside.—Started erection of new breaker; shaft hoisting engines; No. 1 slope engines and No. 2 slope engines placed on new foundations, and new houses erected for the same; colliery supply store; colliery shop; extended brick compressor house, for accommodation of three stage air compressors.

Inside.—Eighteen inch by 30 inch hoisting engines and engine room in rock, on No. 2 slope anticlinal. Pumping plants on 5th, 7th and 9th, Red Ash levels, remodeled with the addition of two simple duplex pumps and two bore holes for water from Ross to Red Ash, thereby concentrating all pumping in Red Ash vein.

# Reynolds Colliery

Outside.—Five hundred H. P. battery B. & W. boilers. Inside.—No. 8 Rock plane, through Red Ash fault, 125 yards.

#### Wanamie

Outside.—Five hundred H. P. battery B. & W. boilers.

Inside.—Pumping plant No. 6 Red Ash slope; extending No. 6 slope through rock, 100 yards; No. 11 tunnel, Baltimore to Red Ash across basin No. 2 drift, 190 yards.

# PARRISH COAL COMPANY Parrish Colliery

One 8 inch bore hole for flushing; one crusher for crushing slate and bone, for flushing; one pair breaker engines; No. 6 slope extended 300 feet; intake air shaft, concreted from surface to rock; one 30,000 gallon water tank; one 20,000 gallon water tank.

#### Buttonwood

Tunnel driven from Kidney to Abbot vein about 560 feet; one 35 foot fan, also fan engine 22x36; one saw engine, etc., for cutting prop timber, etc.; outside railroad, plane and engine, for handling timber, etc., from railroad to head of shaft; concrete wall erected around coal shaft head, also around boiler house; one 30,000 gallon water tank.

# Ninth Anthracite District

LUZERNE AND CARBON COUNTIES

Hazleton, Pa., February 24, 1904.

Hon. James E. Roderick, Chief of Department of Mines:

Sir: I have the honor of submitting herewith my annual report as Inspector of Mines for the Ninth Anthracite District for the year ending December 31, 1903.

It contains the usual tables, also the quantity of coal mined, the quantity shipped to market, the number of employes in the district, a list of the fatal and non-fatal accidents, the number of tons of coal produced per each fatal and non-fatal accident, and remarks on some of the fatal accidents which occurred during the year. The improvements made by the several companies will also be found embodied in the report.

Respectfully submitted,
DAVID J. RODERICK,
Inspector.

# Ninth Anthracite District, 1903 SUMMARY OF STATISTICS

Number of mines in district,	98
Number of mines in operation,	97
	6,358,127
	5,456,405
Number of tons sold at mines to local trade,	126,726
Number of tons consumed at mines in generating steam	
and heat,	774,996
Number of persons employed inside the mines,	8,453
Number of persons employed outside,	6,173
Number of fatal accidents inside the mines,	34
Number of tons produced for each fatal accident inside,	187,004
Number of persons employed per fatal accident inside,.	249
Number of fatal accidents outside,	19
Number of persons employed per fatal accident outside,	325
Number of wives made widows by fatal accidents,	31
Number of children orphaned by fatal accidents,	70
Number of non-fatal accidents inside the mines,	. 75
Number of persons employed per non-fatal accident in-	
side,	113
Number of non-fatal accidents outside,	22
Number of persons employed per non-fatal accident out-	
side,	281
Number of steam locomotives used inside,	7
Number of compressed air locomotives used inside,	12
Number of fans used for ventilation,	54
Number of furnaces used for ventilation,	1
Number of gaseous mines in operation,	35
Number of non-gaseous mines in operation,	63
Number of new mines opened,	1

# TABLE A.—Ninth Anthracite District, 1903

# PRODUCTION OF COAL

Names of Companies	Tons
A. Pardee and Company,	479,146
Coxe Brothers and Company, Incorporated,	991,788
Lehigh Coal and Navigation Company,	1,085,102
G. B. Markle and Company,	1,091,513
Lehigh Valley Coal Company,	998,827
Estate A. S. Van Wickle,	353,426
Calvin Pardee and Company,	318,635
Pardee Brothers and Company,	340,085
Upper Lehigh Coal Company,	262,710
C. M. Dodson and Company,	220,538
John S. Wentz and Company,	112,324
M. S. Kemmerer and Company,	35,569
Black Creek Coal Company,	29,203
Pond Creek Coal Company,	16,134
W. R. McTurk and Company,	14,629
Thomas R. Reese and Son,	8,498
Total,	6,358,127
Production by Counties	
Luzerne,	4,438,465
Carbon,	1,919,662
Total,	6,358,127

TABLE B.—Ninth Anthracite District, 1903

	oduced per accident; number of persons employed; number employed per	
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	accidents;	
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obia.	Number of employes out per non-fatal accident	224 167 169 385 381 392 216 171 161	281
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s	Total number of employe	12999999999999999999999999999999999999	14,626
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per	Tons of coal produced fatal accident inside	289-573 165-295 120-557 120-557 120-557 166-187 170-642 170-64	187, (04
idents	TefoT	21 00 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	26
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Fatal Accidents	Outside	H1010 0100 01 m	19
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	Names of Companies	A. Pardee and Co., Coxe Exchers and Co., Inc., Coxe Exchers and Co., Inc., Coxe Exchers and Co., Inc., Echigh Valley Coal Co., Coxer and Coxer and Co., Coxer and Co., Coxer and Co., Coxer and	Totals and averages for district,

TABLE C.—Ninth Anthracite District, 1903 Classification of Fatal Accidents

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	Ey Falls of	Slate	
	Ey	- [go]	
			January, North Morth May Man May Man Man Man Man Man Man Man Man Man Man
			January, Folymary March May May June June June Nover Cert lest Nover Cert lest Nover Cert lest
			Market Ma

TABLE D.—Ninth Anthracite District, 1903 Classification of Non-Fatal Accidents

		Islot basid	0 C C C C C C C C C C C C C C C C C C C	2.6
		Total outside	440001010111 1111 01	81
ı,		Miscellaneous causes	676700	10
Mine		By boiler explosions		
Outside of Mines		Is suffecetion		
Outs		Гуу тасріпету		60
		By cars	eo eded d	6
		Total inside	್ ನ ಬಲ್ಲಿ ಮಲ್ಲಿ ಬೀಟ್ ಬೀಟ್ ಆ ಆ ಮ	13
		Miscellaneous causes	ਹ। ਤਾਂ ਤਾਜਦਾਜ਼ ਜ	11
		Suffocated by coal, etc.		
		By mules		
		solvethed at botteries		
	into ;	Manwags, breasts, etc.		C1
to.	Falling Into	Slopes		
Inside of Mines	By Fa	Shafts		
side o		By blasts, etc.	ਜ਼ਬਾਂ ਜ਼ਬਾਂ ੦	10
Ins		Powder and dynamite	21	60
		Smothered by gas		
		By explosion of gas	H C1 HH 4	6
		By mine cars	H H HOHHHONH	13
	of	Roof	H HH 3 H H	1
	By Fails of	Slate	01	2
	By	Ceal	व ं नन ं नशनन	6
			January, February March, April, May June, June, July September, October, December,	Totals,

Occupations of Persons Killed or Fatally Injured Inside and Outside the Mines TABLE E.—Ninth Anthracite District, 1903

	Intot binato .	61466161-045631E	60
	Spirate dated	11 — KD 010101   01   00	2
	All other employes	ର କଳ ଗର ଗ ଚ	12
	sarafo bas saaqooa-ao. H		
	(nem) sreshiq otals		
Outside	Slate pickers (boys)		C1
0	Engineers and firemen		-
-	Hacksmiths and carpenters		
	nəmərol əhistuO		-
	Superintendents		:
	əbizni IstoT	010100 H H 1011-01 W H 0101	50
	All other employes		-
	Company men		:
	пещфипф		
	Door-poys and helpers		-
Inside	Drivers and runners		53
	Miners' Inbovers	F	10
	zi9u!IX	e : 00 e e : 01 kG e : 44 e e 01	21
	Pire bosses and assistants		
	nomorol onim tuntaissk		
	nemerol enila		-
		January. Petentry. March. March. May. Juny. Juny. Saptember. Saptember. Navaniber. Navaniber.	T. tals,

TABLE F.—Ninth Anthracite District, 1903 Occupations of Persons Injured Inside and Outside the Mines

	Grand total	0 110 110 110 110 110 110 110 110 110 1
	Total outside	4 파 00 1 01 1 1 대
	VII office employes	~ : : : : : : : : : : : : : : : : : : :
	Pook-keepers and clerks	
đe	(mem) stakete pickers	HHH ::01 ::1 10
Outside	Slate pickers (boys)	
	Engineers and firemen	~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~
	Blacksmiths and carpenters	
	Superintendents	
	əbizni İstoT	1000 × 61 × 100
	All other employes	H 61
	('ompany men	
	ритртеп	
	Door-beys and helpers	
Inside	Drivers and runners	H4 H01
	Miners' laborers	ಚಲ್ಲಾಗು ಕಲ್ಲಿಯಾಗು ಟ್ರಿ
	siəniM	03 4 00 H H 60 51 H F 61 4 F 62
	Fire bosses and assistants	
	nemerol enim fasteissk	
	Mine foremen	
		January. February. March. March. May. May. July. July. September. September. December. Totals.

#### TABLE G.-Ninth Anthracite District, 1903

Nationality of Persons Killed or Fatally Injured Inside and Outside the Mines

	American	English	Irish	German	Polish	Hungarian	Italian	Slavonian	Lithuanian	Austrian	Russian	Tyrolian	Totals
January, February, March, April, May, June, July, August, September, October, November, December,	3 6	1 1	1 1	1 1 1 1		2 2 2		1	1	3 1	1	1	24221679463225
Totals,	15	2	5	6	5	9	9	1	1	4	1	1	53

TABLE H.—Ninth Anthracite District, 1903

Nationality of Persons Injured Inside and Outside the Mines

	American	English	Irish	German	Polish	Hungarian	Italian	Slavonian	Lithuanian	Austrian	Russian	Totals
January, February, March, April, May, June, July, August September, October, November, December,	4 1 1	1	1	1 	1 2 2 2 1 3 1 3 1	21 4 5 1 5 2 12 4 1	1 1 1 1  1  2	1 1	1		1	9 10 12 10 4 10 6 6 6 7 8 9
Totals,	21	1	6	7	16	28	7	7	1	2	1	97

TABLE I.—Ninth Anthracite District, 1903

Operators and mines, kind of openings, type and size of fans, size of furnaces, volume of air produced by fan or furnace per minute, number of splits of air currents, number of persons employed inside, and quantity of air produced for each employe per minute

Average number of cubic feet per minute provided for each person	1, 08.3 1, 145 58.3 25.3 25.3 27.3 27.3 27.105 38.9 615 615 718 711 427 711 427 711 427 711 711 713 713 713 714 717 717 717 717 717 717 717 717 717
Number of persons employed inside	11 00 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
Zumber of cubic feet per- rinute passing cut at out- fet	155 23 4 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5
Total quantity of air per fin all activities of the feet the splits in cubic feet	88, 88, 88, 88, 88, 88, 88, 88, 88, 88,
Number to cubic feet to sir and the content of the	123, 923 1111, 125, 126, 126, 126, 126, 126, 126, 126, 126
Number of splits of air cur-	1- 0040   4010   1000000   40100
Power used	Steam. Steam. Steam. Steam. Steam. Steam. Steam. Steam. Steam. Steam. Steam. Steam. Steam. Steam. Steam. Steam. Steam. Steam.
Name of fan	Guibal Guibal Guibal Guibal Guibal Guibal Guibal Guibal Guibal Guibal Guibal
mi-bodolovoh gauge developed-in softer	ರ್.∽ ಜ ಜ ಜ
Teq anoitulover of revolutions per minute	5-7-8 5-7-8
Depth of blades in feet	444444 m40 4 6 4 6 7 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6
teet in teet	41.4444 844 10 10 10 10 10 10 10 10 10 10 10 10 10
Diameter of fan in feet	20 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5
Method of ventilation	Fan Fan Fan Fan Fan Fan Fan Natural. Natural. Natural. Natural. Natural. Fan Fan Fan Fan Fan Fan Fan Fan Fan Fan Fan Fan Fan Fan Fan
snoəse3-uou 10 snoəset)	Non-gas. Non
Zainogo do baiA	Slope Slope Slope Slope Slope Slope Slope Slope Slope Slope Daile Daile Daile Punnel
Names of Operators and Mines	A. Pardee and Co. Cranberry No. 1 South, Cranberry No. 4 South, Cranberry No. 4 Cranberry No. 6 Cranberry No. 6 East Crystal Ridge, Coxe Brothers and Co. Inc. Drifton No. 2 East, Drifton No. 1 Eckley No. 1 Eckley No. 1 Eckley No. 0 Eckley No. 6 Eckley No. 6 Eckley No. 6 Eckley No. 6 Eckley No. 6 Eckley No. 6 Eckley No. 6 Eckley No. 6 Eckley No. 6 Eckley No. 6 Eckley No. 6 Eckley No. 6 Eckley No. 6 Eckley No. 6 Eckley No. 6 Eckley No. 6 Eckley No. 7 Eckley No. 7 Eckley No. 6 Eckley No. 6 Eckley No. 6 Eckley No. 7 Eckley No. 7 Eckley No. 7 Eckley No. 7 Eckley No. 6 Eckley No. 6 Eckley No. 6 Eckley No. 6 Eckley No. 6 Eckley No. 6 Eckley No. 6 Eckley No. 6 Eckley No. 7 Eckley

man and the second					
1,277 500 382 307 686 789	371 253 378	332 2443 2443 2443 2443 375 375 375 375 375 375 375 375 375 37	944 913 133	938 213 368 267 310	1.115
# 18 # 28 # 28 # 28 # 28 # 28 # 28 # 28	169 ST3 ST4	123 123 123 123 123 123 123 123 123 123	100	15 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5	25
125, 33 (2, 4, 6) (3, 13) (3, 13) (3, 13) (3, 13) (3, 13)	137, 670 94, 280 (6, 000 76, 000	6.00 K	53. 53.69.69 5.61.69 5.61.69	\$31,000 \$51,000 \$51,000 \$5,000 \$5,000 \$5,000	63,000
120, 900 13, 500 13, 600 13, 600 15, 100 15,	6.2 kg 4.2 kg 2.	44, 920 7, 025 2, 100	30, 0c0 25, 690 22, 0c0	28,000	
118.9% 45.73 13.000 62.400 62.400 63.100 63.100	116,600 94,250 60,500 64,000	686 4 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6	49, 23, 5, 6, 10, 10, 10, 10, 10, 10, 10, 10, 10, 10	30, 100 8, 010 82, 910	58,000
(a) (c) (c) (c) (c) (d)	x 6	१+ प्राची t + ४८ चर t - वर्ष ४० चर		!	63
Steam. Steam. Steam. Steam. Steam.	Steam Steam Steam Steam Steam Steam Steam	Steam, St	Steam, Steam,	Steam,	Steam,
Guibal Guibal Guibal Guibal Guibal Guibal	Guibal Guibal Guibal Guibal Guibal Guibal Guibal Guibal Guibal Guibal Guibal Guibal	Gurbal Gurbal Gurbal Gurbal Gurbal Gurbal Gurbal Gurbal Gurbal Gurbal Gurbal Gurbal Gurbal Gurbal Gurbal	Guibal, Guibal, Guibal,	Guibal, Gulbal,	Guibal,
1 1 1 1 1 1 1 2 9	erit i i i i i i i i i i i i i i i i i i			1.20	13%
8929588	65 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5	88868548888	250	::19518	13
ದಾಣವಹಾಣವರ ಪಾತ್ರ ಪ	40444449994	©104410910444	22.6	्यां का का च्यां का का	00
& - 12 × - 00 ×	4 1- 4 4 4 4 4 6 6 6 6 4 6 10 10 10 10 10 10 10	6 4 4 4 4 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5	ক ৩1 ৩1	4.6	4.6
######################################	119222222229191919191919191919191919191	20 14 14 16 16 16 16 16 16	31 4 4	16 16 16	16
Fan Fan Fan Fan Fan Fan Fan	Fan Fan Fan Fan Fan Fan Fan Fan Fan	Fan Fan Fan Fan Fan Fan Fan	Fan Fan	Fan. Fan. Fan. Fan.	Fan,
Gaswous, Non-gas, Non-gas, Non-gas, Gascous, Gascous, Non-gas,	Gaseous, Gaseous, Gaseous, Caseous, Caseous, Non-gas, Non-gas, Non-gas, Non-gas,	NOOP-SES. NOOP-SES. NOOP-SES. NOOP-SES. NOOP-SES. NOOP-SES.	dase us, Non-gas. Non-gas.	Non-gas. Gascous, Gascous, Non-gas. Non-sas.	Gaseous,
Shaft Tunnel. Tunnel Slope Shaft Shaft	2	System Sy	Slope	<u> </u>	Moles,
Lehigh Coal and Navigation Co. Colliery No. 1. Colliery No. 1. Colliery No. 1. Colliery No. 1. Colliery No. 1. Colliery No. 2. Colliery No. 3. Colliery No. 5. Colliery No. 6.	G. B. Markle and Co. Jeddo No. 4. Teldo No. 4. Highland No. 5. Highland No. 5. Highland No. 6. Highland No. 6. Highland No. 2. Highland No. 2. Highland No. 2. Highland State Ebervale.	Hazleton No. 1, Hazleton No. 1, Hazleton No. 3, Hazleton No. 3, Hazleton No. 5, Hazleton No. 7	Estate of A. S. Van Wiese) Buck Mennian Evans Evans Fro k. Mountain, inside	Calvin Pardee and Co. Hawwood N., 1 Darwood N., 4 Harwood N., 5 Harwood N., 5 Harwood N., 21,	Pardes in others and Co. Lettimer No 4.

	274 364	401		229 153	286 286 1,136	
	173	157		21	15 # S	
	56,500 26,500	80,000		6,400 8,900	10,000	
	47,500	75,000		1 001	10,000 4,000 9,100	
	47,509 21,000			ii i	-	
	Steam			Steam,		
	Guibal			Dempfels,.		:
	: :	:	:			:
	5.5			275	_	
			:	2.6		
	16 16			4		
	Fan,	Natural,		Natural, Fan,	Natural, Natural, Natural,	
	Non-gas.	Gaseous,		Non-gas. Non-gas.	Non-gas. Non-gas. Non-gas.	
	Slope,	Slope,		Drift,	Shaft	Slope,
Upper Lehigh Coal Co	C. M. Dodson and Co. Beaver Brook No. 10, Beaver Brook No. 11,	John S. Wentz and Co.	M. S. Kemmerer and Co. Sandy Run,*	Black Creek Coal Co. Rome colliery. Harleigh colliery.	Pond Creek Coal Co. Pond Creek. Pond Creek No. 1, Pond Creek No. 2,	Thomas R. Reese and Son Dusky Diamond.*
		Slope. Non-gas. Fan, 16 65 Guibal, Steam, 4 47,509 56,509 173 Slope. Non-gas, Fan, 16 65 Guibal, Steam, 3 21,00 21,609 56,509 66	Slope, Non-gas, Fan, 16   70   Guibal, Steam, 4   47,569   56,560   173   56,560   183   56,560   183   56,560   183   56,560   56,560   183   56,560   56	Slope, Non-gas, Fan, 16 70 Gulbal, Steam, 4 47,500 47,500 55,500 173 Slope, Caseous, Natural, 65 Gulbal, Slope, Gaseous, Natural, 65 Gulbal, Slope, 66 Gulbal, Slope, Gaseous, Natural, 67 Gulbal, 67	Slope   Non-gas. Fan, 16   65   Guibal, Steam   4 47.500   56.500   173   51.00   50.500   173   51.00   51.	Slope, Non-gas, Fan, 16 70 Gulbal, Steam, 4 47.500 56.500 173 Slope, Non-gas, Fan, 16 65 (tulbal, Steam, 3 21,00 24,00 56.500 66 Dirith, Non-gas, Natural, 4 2.6 1.3 275 Dempfels, Steam, 1 6.900 4.800 6.400 21 Slope, Non-gas, Natural, Nat

\*Numerous cave holes prevent measurement, †Robbing pillars; no air measurements taken.

TABLE 1.—Ninth Anthracite District, 1903 Operators, Location of Collieries, Railroads, Etc.

11	-	<u> </u>								
	Railroad to Mine	Lehigh Valley Lehugh Valley	D. D. S. S. S. S. S. S. S. S. S. S. S. S. S.	000000 844444 822222 822222 822222	Lehigh Valley Leh an Valley Lehan Valley	Lehigh Valley Leh gh Valley Lehogn Valley	L. V., C. R. R. of N. J. and P. & R.	D., S. and S.	D., S. and S.	C. R. R. of N. J.
	P. O. Address			Latus ford. Latus ord. Latus ord. Latus ord. Latus ord. Latus ord.	Jeddo,	Hazleton,		Lattimer,	C. Pardee, Jr., Lattimer,	Upper Lehigh,
	Name of Super- intendent			Baird Snyder, Jr., Band Snyder, Jr., Band Snyder, Jr., Band Snyder, Jr., Band Snyder, Jr., Band Snyder, Jr.,	Samuel Dunkerby, mesde sapt.; AP- thur Goodecke, outside supt.	===		C. Pardee, Jr.,	C. Pardee, Jr.,	Upper Lehigh, George Wilmot, Jr. Upper Lehigh, C. R. R. of N.
American de la company de la c	P. O. Address	Hazleton,	Drifton, 19 (160), 19 (160), 19 (160), 19 (160), 19 (160),	Lansford, Canstord, Leanstord, Leanstord, Leanstord, Leanstord,	Jeddo,	Wilkes-Barre, Wilkes-Barre, Wilkes-Barre,	Hazleton,	Lattimer,	Lattimer,	
	Name of General Su- permitendent	Frank Pardee,	L. C. Smith, Manager, L. C. Smith, Manager, L. C. Smith, Manager, L. C. Smith, Manager, L. C. Smith, Manager, L. C. Smith, Manager, L. C. Smith, Manager,	W. D. Zehner, W. D. Zehner, W. D. Zehner, W. D. Zehner, W. D. Zehner, W. D. Zehner, W. D. Zehner,	William H. Smith, Jr William H. Smith, Jr William H. Smith, Jr	S. D. Warriner, Mgr., S. D. Warriner, Mgr., S. D. Warriner, Mgr.	John Harvey,	A. W. Drake,	A. W. Drake,	A. C. Leisenring,
	County	Luzerne, .	Luzerne, . Luzerne, . Luz rne, . Carbon, Luzerne, .	Carbon, Carbon, Carbon, Carbon, Carbon, Carbon,	Luzerne, . Luzerne, . Luzerne, .	Luzerne, Carbon,	Carbon,	Luzerne, .	Luzerne, .	Luzerne, .
	Names of Operators and Col- lieries	A. Pardee and Co. Cranberry. East Crystal Nidge,	Coxe Brothers and Co., Inc. Derfron Nes 1 and 2. Evelye and Sack Mountain. Breview Medicine. Braver Medicine. Derver Medicine. Dervinger and Gowan,	Lehisch C. at and Navigation Co. Collecty No. 1. Control No. 4. Control No. 5. Collecty No. 6. Collecty No. 6. Collecty No. 6. Serven building.	G 13 Markle and Co. Jeddon No. 4. Hughland No. 5.	Hazbeh Volby Coal Co. Hazbeton No l. Hazbeton shaft.	Estate of A. S. Van Wickle Coleranne and Iwans,	Calvin Pardee and Co. Harwood,	Parise Brothers and Co.	Upper Lehigh Coal Co.

TABLE 1- Continued.

	 ب ب	-	-	-		<u>.</u>	
Railroad to Mine	 R, G. Russel, Audenried, L. V. and C. R. R. of N. J.	Lehigh Valley	C. R. R. of N. J.	Lehigh Valley Lehigh Valley	Lehigh Valley	L. V. and C. R. R. of N	Lchigh Valley
P. C. Address	Audenried,	Hazle Brock,	Mauch Chunk, George D. Kugjer, Sandy Run, C. R. R. of N. J.	Hazleton, Lehigh Valley Hazleton, Lohigh Valley	Zehner P. O.,	Mahanay City,	Lehigh Valley
Name of Super- ntindat	R. G. Russel.	John Weber,	George D. Kugler,		I .D. Thomas,		
P. O. Address	Audennied,	1100 Girard Trust Bldg., Phila.		Hazleton,	Pittston,		Audenricd,
Name of General Superint adout	E. L. Bullock,	John L. Wentz,	M. S. Kemmerer,	James Rowe,	W. G. Thomas, Pittston, I.D. Thomas, Zehner P. O., Lehigh Valley	W. J. Heiser,	Thomas R. Reese,
County	Luzerne, .	Luzerne, .	o. Luzerne,	Luzerne.	Luzenne, .	Carbon,	Luzerne, .
Names of Operators and Col- herics	C. M. Dodson and Co. Beaver Brook, E. L. Bullock,	John S. Wentz and Co.	M. S. Kemmerer and Co. Sandy Run.	Black Creek Coal Co. Rowe, Harleigh,	Pond Creek Ctal Co.	W. R. McTurk and Co Star washery,	Thomas R. Reese and Son. Luzerne, . Thamas R. Reese, Audenried,

TABLE 2.— Ninth Anthracite District, 1903

Number of tons of coal mined in each colliery, number of days worked, number of persons employed, number killed and injured,

	Number of horses and mules	134	160	11 45 Z	E   3	इ८ इ.स
	Number of pounds of dynamite	119,675	319,675	1281 1281 1281 1281 1381 1381 1381 1381	B 2	60,000 13,125 13,185 13,680
The second secon	Zumber of kegs of pewdornsod	6, 200 31 o	6,300	1 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4	\$ 1 ± ± ± ± ± ± ± ± ± ± ± ± ± ± ± ± ± ±	111
	simble of non-fatal accidents	- 21	11	-::::	na gu	15
	stubbioon latal to redmuX	(0)	00	4. 10	- =	an 10 ← 21
	so for ture to assume	1,065	1.1.4	, 531485 11	\$   E	
	bektow sych to redaind	1-12 11-13 01-01	5) [-		至 ' 青 1	를 위해 [취 
	suct ni taos to notisuberq faloT	401,125 75,021	174,145	1 45 6 1 1 45 6 1	日 名 名 名 名 名 名 名 名 名 名 名 名 名 名 名 名 名 名 名	314, CD 272, TW
	Number of tons sold to local trade and test of the local	60	1- 1-	1 3/35	200	
	Number of tons used for steam and here at collicions	66,691 7,060	74,560	2429 2429	G-12	23, 255 25, 0.6
	Zunder of tons of coul shipped by tail or otherwise	323, 161 66,578	400,000	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	SH, 826	197, 193 197, 193 193, 783 193, 783 193, 783
	, annty,	Luzerne,		Luzerne, Luz-rne, Luz-rne, ('arb-n, Luzerne,	Luzerne,	Carbon Carbon Carbon,
	Names of Operators and Collectes	A. Pardes and Co. Presidenty.	Tetals,	Coxe Buth is and Co., Inc. Figure 1 and 2. Forker and Buck Munitain. Science in Buck Munitain. Beater Mo. 3. Forther for a few forces. Forther for a few forces.	Tetals,	Collecty No. 1. Collecty Onless on Co. Collecty No. 1. Collecty No. 6. Collecty No. 6. Collecty No. 6.

The duction was included with Calary No. 6.

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552	REPORT OF TH	E DEF	AI	CLIMEIN	Τ. (	OF. MIL	ز کال ۱۹	3	(	JII. L	0
	Number of horses and mules	52	332	176 61	316	10s 45	241	1 52	- F.	96	
	Number of pounds of dynamite	69,320	226, 225	114,322 8,423 13,810	136,555	56.901 11\.\.\$40 13,916	189,657	117,200	81,800	169,950	
	Number of kegs of powder used	0.6	2,840	8,2% 8,634 6,141	23,087	7,98b	22 617	3,700	5.500	7,500	
	Number of non-fatal accidents		13	13 e 13 e 1	55	8 2 63	15	1 10	471	60	
	Number of fatal accidents	2	11	616164	9	co ro ⊷	6	64		4	
	Number of employes	419	2000	1.04	2.176	1,172 372	2,349	814	S56 '	817	
	-ni ton) bedraw zverked (not in-	263	51	815	\\ \frac{21}{61}	#K#	247	197	250	27.7 5.5 6.5	
	rotal production of coal in tons	274,6 \$	1,085,102	472, 73 s 3 s 3 s 3 s 3 s 3 s 3 s 3 s 3 s 3	1,001 513	\$18,907 494,78 185,182	598, K27	355,426	318,635	240,085	
ned	Isool of bloz enot to godern's sevolume yd besu bus ebrat	10,070	18,680	1,090	6, 277	55,643		1	1,196	4.076	
-Continu	Zumber of fone used for steam	14,5.9	91,707	42,599 46,78 55,141	15.12	11,028 55,062 24,511	.801	55, 333	-fu, 150		
TABLE 2-Continued	Number of tons of coal shipped by rail or otherwise	250,009	971,715	429,549 312,532 188,2227	8.9 6.8	251, 636 43, 136 158, 166	St8, v38	297,533	686,775		
	County	Carbon,		Luzerne, Luzerne,		Luzerne, Carbon,		Carbon,	Luzerne,	Luzerne,	
	Names of Operators and Collieries	Colliery No. 9, Screen building,	Totals,	Jeddo No, 4 and Epervale, Highland No, 5, Highland No, 2,	Totals,	Lehigh Valley Coal Co. Hazleton No. 1 Hazleton shat, Spring Brock,	Totals,	Estate A. S. Van Wickle Coleraine and Evans,	Calvin. Pardee and Co.	Pardve Brothers and Co.	

tTotals in this column are averages

TABLE 2- Recapitulation

				i			1				
		_									
						+-					
A. Pardos and Co.	Luzerne,	400,039	74,260	4.717	479, 146	247	1,204	60			
Cox. Braches and Co. Inc.	Luzerne.	21 1 %	151 763	21 - 6	S-1-1-36	010	2, 134	11			
Leh ab Calund Nasignton Co.,	Carb m,		91, 767	18, CC	1,05,102	13	00000	1.4	10	226, 25	61
G. B. Mark's and Co.			124,528	6, 77	1,001 5:3	855	10.1	9		_	
Lehgh Valley 'a Ca.			91, vel	27.6	50 V 65	- 01	2,044	g,			
Estate A S Van Wickle,			523. 533	2, 360	373 156	196	7	Φ1			
Ca sin Parise and Cu.,	Luzerne,		40,150	1,196	SIN, 635	250 .	S256				
Papies Brith r. and Co.			46.9.0	4,076	1240, 0351	- 601.01	SIT	4		_	
Upper Lehigh Ca. Co.,	Luzerne,		37,3%S	-1. 12S	012 246	246	N:.9	¢1			
C. M. Doden and Co.	Luzerne,		30,000	525	220 738	976	4.3	7		_	
John S Wentz and Co.,			20,000	566	112,321	1.80	349	:	4 6 9	_	_
M S. Ken merer and Co.,			6.0.5	1.5.1	35 509	139	136	1	1 . 2007		
Black Crook Coll Co.,			3,625	6,547	29, 203	2558	105	:	1 610		
Pend Creek Coal Co.	Lazarne,	11,356	1,470	108	16,134	55-	97	:	188	_	
W. R. McFurk and Co.,	Carbon,	14.479	150		14,620	:	136		1		2
Thomas R. Reese and Son,	Luzerne,	3,150	635	4,713	8,458	282	50		159		LED)
Totals,		5, 456, 415	774,996	126,726	6,378,127	25.8	14,628	78	97 99, 148	1,220,540	1,793
tNot including washarias								-			

## TABLE 2-('ontinued

	Number of air compressors	7	г	03 01 04	t-	prof prom	2	6.0
	Number of electric dynamos			F 19	60			
Der.	Quantity delivered to surface minute-gallons	7,600	7,600	5,700 1,500 2,50 3,200 4,000	14,650	4, 507 2, 740 940	8,187	1,350
- Par	Capacity in gallons per minu	23,100	23,100	2,500 2,500 300 4,700 6,000	20,500	7,318 6,245 2,080	15,643	1,350
Sui:	Number of pumps deliver	15	12	@ m = 1-	21	4.63 61	6	-
	Total horse power	4,435	4,945	1,410 1,613 150 1,425 1,060	5,658	532 467 260 1,327 575	3,886	2,446
[[B	Number of steam engines of	68	39	ទីឱ្យខ្លួ	88	23 8 6 17 17 19	119	68
res	Electric							
Locometives	πίΛ	1		63 63 64	ي			
Loc	Steam	100	=	21-31-36	19	0H 440	23	00
	Tewal horse power	4.085	4,545	44. 1557.1 1000.2 1000.	11,970	3,000 2,240 2,240 3,200 1,908 1,832	12,430	3,140
ers	Horse power	3,035	3,035	4,700 1,535 1,925 1,925 1co 2,500	10,760	2,674 2,032 3,260 1,700 1,832	11,688	3,140
of Boilers	Tubular	15	15	SI SI SI SI SI SI SI SI SI SI SI SI SI S	55	다 S S 포트립	6.0	2
Number	Horse power	1,65)	1,530	220 220 330	1,210	22.6 20.8 20.8	742	
Z	(*Ylindrical	88	13	00 B B	23	250 9	47	
	:A	::	:		:			:
	County	Luzerne,		Luzerne, Luzerne, Luzerne, Carbon, Luzerne,		Carbon, Carbon, Carbon, Carbon, Carbon,		Luzerne,
	Names of Operators and Collieries	Cranberry, A. Pardee and Co. East Crystal Ridge.	Totals,	Coxe Brethers and Co., Inc. Drifton Nos 1 and 2. Exley and Buck Mountain, Stockton, Stockton, Deaver Meadow, Tombilden, Derringer and Gowan,	Totals,	Lehigh Coal and Navigation Co. Colliery No. 1. Colliery No. 4. Colliery No. 6. Colliery No. 6. Colliery No. 9. Screen building.	Totals,	G, B Markle and Co. Jeddo No. 4 and Ebervale,

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Luzerne, Luzerne,		Luzerne, Luzerne, Carb. b.		Carbon.	Luzerne,	Luzerme,	Luzeine,	Luzerne,	Luzerne,	Laz rne,	Luzerne, Luzerne,		Luzerne.	Carbon.	Luzerne.	
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- :		Teg.		= :			h Coal	C. M. Dodson and Co.			Dlack Creek Coal Co.			irk and		
		Vall		7. X.	Parel	Broth	I. hig	Dods	Wei	· mim	('res-l		Стеек	McTu	27	
ef di Lis	Totals,	Lehigh Valley No. 1, shatt, ook,	Totals,	Estate A. S. Va and rivans,	Calvin Pardee	Parder Brothers	Upper Lahigh	M.	John S. Wentz	7.	Hack V.	Totals,	- Pur-	W. R. McTurk ery,	Thomas R Reese Diamond,	Grand totals,
ZZ EE	stals,	E E E	stads,	Est n and	11.	7.	Leger'l	Broom	J. Proc. II	M. Rum.	I History	11:13	rouk.	Washer	Thon	and
Highland No. 2, 111	7.7	Izehigh Valley u Hazleten No. i. Hazleten shait. Spring Brock.	71.	Estate A. S. Va Colorain and rivans,	Calvin Pardee Huwool,	Partimer,	Upper Lebugh	C. M. Dodson Beaver Brook,	Hazle Brack,	M. S. Wennierer sandy Run,	Bawe e Biery, Berbrigh collecty,	7.	Pond Creek,	Star washery,	Thomas R Reese Dusky Diamond,	Gr

"Jeddo tunnel drainage.

# TABLE 2-Recapitulation

	Number of air compressors	52 1 22.2.1
	Number of electric dynamos	0 THEFT 0
per	Quantity delivered to surface	7. 600 11. 650 12. 650 12. 650 12. 650 13. 650 13. 600 13. 600 13. 600 13. 600 13. 600 13. 600 13. 600 13. 600 14. 600 15. 600 16. 600 16. 600 17. 600 18. 600
əju	Capacity in gallons per min	23, 100 20, 300 10, 643 11, 643 11, 643 11, 643 11, 643 11, 543 11, 543 11, 115 11, 11
Buir	Number of pumps delive	100 C 1 C 1 C 1 C 1 C 1 C 1 C 1 C 1 C 1
	Total horse power	4 0 45 8 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6
[ all	Number of steam engines of	88 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8
ives	Electric	
Locomotives	TiA	12
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	Total horse power	11.1.3.1.1.1.1.1.1.1.1.1.1.1.1.1.1.1.1.
era	Horse power	2.000 2.000 2.000 2.000 2.000 2.000 2.000 2.000 2.000 2.000 2.000 2.000 2.000 2.000 2.000 2.000 2.000 3.000
of Boil	TsiuduT	21 1 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2
Number of Boilers	Horse power	1,530 1,216 1,216 1,110 1,000
Z	Cylindrical	10004142 15144 00 4 4 4 4 4 4 4 4 6 6 6 6 6 6 6 6 6
	County	Luzerne, Carbar Carbar Carbar Carbar Carbar Luzerne, Luzerne, Luzerne, Luzerne, Luzerne, Luzerne, Luzerne, Luzerne, Carban, Luzerne, Luzer
	Names of Operators and Collieries	A. Pardee and Co.,  Coxe Brothers and Co.,  Lebigh Coal and Navigation Co.,  Estate A. S. Van Wickle,  Lebigh Yalley Toal Co.,  Pardee Brothers and Co.,  C. M. Dodson and Co.,  C. M. Dodson and Co.,  C. M. Dodson and Co.,  M. S. Kemmers and Co.,  M. S. Kemmers and Co.,  M. S. Kemmers and Co.,  M. S. Kemmers and Co.,  M. S. Kemmers and Co.,  W. R. McTurk and Co.,  W. R. McTurk and Co.,  W. R. McTurk and Co.,  Thomas R. Reese and Son,  Totals,

TABLE 3.—Ninth Anthracite District, 1903 Number of Each Class of Employes at Each Colliery

1			1 1	1	11
		Grand total, inside and outside	1,069	88.8 88.6 88.6 88.6 88.6 88.6 88.6 88.6	9 98 27 5 4 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5
	side	Total outside	429	1 55 7 5° 5 5	26.5 16.7 17.0 17.0 17.0 17.0 17.0 17.0 17.0 17
-	d Out	All other employes	245	814-402	E 1 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2
	ploye	Sarely and clerks	eo : eo	SH - 21	-
	Persons Employed Outside	spread (men)	£ : 31	2.2 5 8 8 8	118 26 21 21 116 116 116 116 116 116 116 11
-	Persor	Slate pickers (boys)	21 - 61 10 - 11	50 19 5	\$ t 2 2 3 8
	Jo	Engineers and firemen	83 10	85"8 8 8	48×28E E
	tion	dackstonins and carpenters.	7 6	8- 12 E 18	5 to 8 rate 15
	Occupations	nemeral shistory	51 . 01		
	00	Superint-ndents	7:,5	r <del>-</del> T	
		əbisni IntoT	109	215 215 215 335 1139	247 212 221 249 249 1.267
	nside	All other employes	50 4	82228	8 98898
	oyed 1	Сотрапу теп	89 A	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	97 4 61 9 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6
	Employed Inside		6.7	F-F :01 :00   C	44   0
	Persons	Door beys and helpers	88 7	15 12 12 12 12 12 12 12 12 12 12 12 12 12	1 12 - 1   9
		sa)uun pur saoviv.	1 1 2	14 13 13 14 14 14 14 14 14 14 14 14 14 14 14 14	#31252   2
	Jo su	Miners' laborers	25 g	22 4 11 40 80	44 41 113 113 113 113 113 113 113 113 11
	Occupations	riners	989	異なる最高   場	8 8 8 8 8 8 9 9 9 9 9 9 9 9 9 9 9 9 9 9
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		Assistant milne foremen	\$1 m   50	HH - 64 15	
		Aline foremen	Apr 50   10	31	0051 00
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		County	Luzerne, Luzerne,	Luzerne, Luzerne, Luzerne, Carbon, Luzerne, Luzerne,	Carbon, Carbon, Carbon, Carbon, Carbon, Carbon,
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		Name	A. Cranherry, East Cryst Totals	Coxe Bre Drifton Noss Eckley and Strockton. Ton meken, Derringer at Tontals.	Lehigh Colliery Colliery Colliery Colliery Colliery Colliery Colliery Screen L

TABLE 3-Continued

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Persons	gjuje ly, gets (poke)	250	185	278	, 5	28	약	36	54	55
of	Engineers and firemen	6143	3	- 258	6.5	1 5	81	46	13	52
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Employed	Pumpmen	===	19	x 1+ x	89	12	10		=	
Persons	suct beys and helpers	\$7.79 	108	126	<u>61</u>	1	61	4	. 19	00
1	Dilvers and runners	848	136	8.48	188	90	45	34	3.5	55
cas of	Miners' laborers	533	485	1323	100	182	167	146	109	86
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	Count	Luzerne, . Luzerne, . Luzerne, .		Luzerne, . Luzerne, . Carbon,		Carbon,	Luzerne, .	Luzerne, .	Luzerne, .	Luzerne, .
	Names of Operators and Collieries	G. B. Markle and Co. Jeddo No. 4 and Ebervale, Highland No. 5, Highland No. 2,	Totals,	Lehigh Valley Coal Co. Hazl.ton No. 1. Hazleton Shift, Spring Erook,	Totals,	Estate A. S. Van Wickle	Calvin Pardee and Co.	Pardve Brothers and Co, Lattimer,	Upper Lehigh Coal Co.	C. M. Dedson and Co. Beaver Brock,

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John S. Wentz and Brook,	M. S. Kemmerer and dy Itun,	Rack Creek Ctal Co. Luzerne, Harkigh colliery, Luzerne,	7	Pond Creek Coal Co.	W. R. McTurk and Co. Star washery,	Thomas R. Reess and Son. ky Daanobd.	Grand totals
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TABLE 3-- Recapitulation

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	A. Pandes and Co.,	C. B. Markle and Co Lebsh Valley Cal Co	Deter A. S. Vica Wick, Soft Boother, and Co., Parish and Co., True E. Parish and Co., True S. Vicara, and Co., True S. Vicara, and Co., Mark Co., Co., Co., Co., Co., Co., Co., Co.,	
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TABLE 3-Continued

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	Totals	247	247	246 193 215 186	210	263 249 245	263	255	236 221 226	228
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	November	14.2	14.2	14 10 10	10.8	19.2 18.9	18.9	18.8	16.3	15.2
reaker	Tedobo	17.1	17.1	122	13.5	21.6 18.4 17.6	19.2	19.2	13.5	14.7
th in B	September	19	19	20 17 19	18	21.6 21.6 12.4	21.3	19.2	19.5	18.3
ch Mon	tsu3uA	21.5	21.5	20 13 20 18	19	23.4 22.2	21.7	90.3	90.6 16 19.2	18.6
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ys Wor	June	22.9	22.9	123 23 18	20.5	22 1 18.3 20.1	22.6	20.8	21 21 19.7	9.02
Number of Days Worked Each Month in Breaker	Мау	19.8	19.5	18 18 18	19.8	21.2 22.5 21.5	21.5	21.7	20 20.3 19.1	19.8
Number	lliqA	21.7	21.7	23 17 20 16	10	23.4	93.4	22.8	22.6 22.2 21	21.9
	Матећ	22.8	2.52	255 188 20 16	19.8	21.1 19.1 22.8	23.4	21.6	22.5 22.6 21.3	22.1
	February	21.8	21.8	138 17	18.8	20.1 21.5 21.6	21.7	21.2	20.3 20.7 19.9	20.3
	January	25.6	25.6	23 17 20 16	19	26.5	2.2	25.4	21.4	21.5
	County	Luzerne,]		Luzerne, Luzerne, Luzerne, Carbon,] Luzerne,]		Carbon,	Carbon,]		Luzerne, Luzerne,	
	Names of Operators and Collieries	Cranberry, A. Pardee and Co. Fast Crystal Ridge,	Average	Drifton Nos 1 and 2. Bekley and Buck Mountain. Stockford. Tounteen.	Definition downs Averages,	Lehigh Coal and Navigation Co. Colliery No. 1. Colliery No. 5.	Colliery No. 6, Colhery No. 9, Seren building,	Averages,	G. B. Markle and Co. Jeddo No. 4 and Ebervale, Highland No. 2, Highland No. 2,	Averages,

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16.8	16.6	1 001 1 - 1 001	15.51	16.6		1 12	16.2	6.0	8.81	160	10	81	16.8
## CE CE CE CE CE CE CE CE CE CE CE CE CE	19.5	101	81	6.63	%	18.5	60	10.6	10 60	24.5	10	53	18.6
20.9	21.6	1 1-1	60.24	21.5	10.0	13.5	61.8	9.6	26	155	15	6.0	19.3
23 25 4. 55. 33 4.	01	THE GUI	2.3	21.9	20.6	05	17.6	11.7	23.23	C-7	13	167	20.4
613131	57.75	36	1.55		117	196.4	16	12.6	157	25	6	20	20.1
20.6	20.1	21.3		10 61	5.00	13.4	14.3	13	57 59	2.5		1.0	7.06
81 51 51 81 53 53 81 53 53	13	2.6	51	0.004	6.61		1 :: 1	10.1	25	25.5		95	21.2
22.9	24	93.50	21.8	24.5	20	15.9	11.3	11.8	26 26	26		62	20.8
20.4	21.6	53	9.5.7	4.22	6.2	18.4	15.4	11.7	23	23.5		24	20.5
22.7	1.53.4	56	24. F	26.2	000	20.4	21.6	13	26 26	26	-	7.5	23
-::	:	:	:	:	:	:	:	:	: :	:	:	:	:
Luzerne, Luzerne, Carbon,		Carbon, .	Luzerne,	Luzerne,	Luzerne,	Luzerne,	Luzerne,	Luzerne,	Luzerne, Luzerne,		Luzerne,	Luzerne,	
Hazleton No. 1, Hazleton No. 1, Hazleton Shaft, Spring Brook.	Averages,	Estate A. S. Van Wickle Colerain and Exans,	Calvin Pardee and Co. Harwood,	Lattimer,	Upper Lehigh, Coal Co.	C. M. Dodson and Co. Beaver Brock,	John S. Wentz and Co.	M. S. Kemmerer and Co. Sandy Run,	Black Creek Coal Co. Rowe colliery. Harleigh coluery.	Averages,	Pond Creek, Coal Co.	Thomas R. Reese and Son.	Averages,

# TABLE 3- Recapitulation

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	Tolomboe(I	FUNDER FU
	Newsber	25077449444444444444444444444444444444444
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ed Eac	Aluk	81
s Work	onat.	2007-2008-21-2-2-10-2-0-0-10-2-0-10-2-0-10-2-0-0-10-2-0-0-10-2-0-0-10-2-0-10-2-0-10-2-0-10-2-0-0-10-2-0-0-10-2-0-0-0-0
Number of Days Worked Each Month in Preaker	VeW	852288498885258 8 8 652576856566
Vumber	ling A	228288888899128
M	Жалей	8187819894487478 <u>8</u> 8
i i	Tobruary	25 25 25 25 25 25 25 25 25 25 25 25 25 2
	January	8-888888888888888888888888888888888888
	County	Luzeme, Luz and Car. Carbon, Luzeme,
	Names of Operators and Collieries	A. Pardee and Co., Coxe Brothers and Co. Inc., Coxe Brothers and Co. Inc., Coxe Brothers and Co. Inc., Coxe Brother and Co., Lehigh Valley Coal Co., Coxe Brothers and Co., Coxe Brothers and Co., Coxe Brothers and Co., Coxe Brothers and Co., Coxe Brothers and Co., Coxe Brothers and Co., Coxe Brothers and Co., Coxe Brothers and Co., Coxe S. Kemmerer and Co., Coxe S. Kemmerer and Co., Coxe S. Kemmerer and Co., Coxe S. Kemmerer and Co., Coxe S. Kemmerer and Co., Coxe S. Kemmerer and Co., Coxe S. Kemmerer and Co., Coxe S. Kemmerer and Co., Coxe S. Kemmerer and Co., Coxe S. Kemmerer and Co., Coxe S. Kemmerer and Co., Coxe S. Kemmerer and Co., Coxe S. Kemmerer and Co., Coxe S. Kemmerer and Coxe Keepen Coxe Coxe Cox.,

TABLE 4.—Ninth Anthracite District, 1.03 Fatal Accidents in and about the Mines

1				
Nature and Cause 1 Accident in Bro-	Carbon. Instantly killed by falling down shall change and instantly killed by a sall of bor new farthers, fattally hupred, run over by estas, Carle a., Fattally injured; by falling down plane Carbon. Fattally injured; crushed by cage at bot an of newfers last the constant by the care.			Partally injured; run over by haded stelpping trucks.  Instantly killed by tail of clay on stringing the stell killed, whiled around a shart on breaker.  On breaker.  Foreign months is and of coal in game way.
County	Carbon, Carbon, Carbon, Carbon,		Luzerne, Carbon, Carbon,	Luzerne, Luzerne, Carbon,
Name of Collects	Spring than k, there is per 1, bit in Lamond No. I common No. I was been beautiful to be not a first on No. 1	Beaver Meadow, Sandy Run, Eckley No, 19, Hazl ton sha t,	Hazlron No. 1 stripping Hazlron No. 1. Tripping No. 1, tripping breaker No. 1. Maddew Strip- Braver Meadow strip- pling.	Drifton No. 1 strippins, Luzerne, Drifton No. 1 strippins, Luzerne, No. 1 brosker, Nasque- Carlson, Boning, Gowan Nos, Luzerno,
Zwiller of tribuls		\$0 E= +0 10		H :
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93A			3 6 11 83	3 1 10
neithqu 200	Lobest, Mart. Car runner. Ter man, Bott m man,	Miner, Miner, Olber,	Laborer, Min-r. Roll tender, Laborer, Repair man,	Top man, Strip foreman, Jig runner,
ZahomdusZ	Padish, Cortisan, American, American, Hungarian,	Hungaria Russian, Hun, aria German,	Lithuantan, Kuthuantan, Hun, arian, American,	American, American,
Name of Pers n	John K-sh, Otto Caldar, Jerry Weeley, August Beehtel, John Clemkaski,	Mike Denke. Adam Maczek. George Pecker. August Platt.		James McNealis. James Patton, Poster Smith, Charles Rupert.
2	2428 <b>8</b> 8		1 410 C H	21 22 22
matter to shed	Jan Feb.	March April	May	James

ri e L.	while	while	while	while	n rib	shot	fast	reast.		shot	way.	dolas	lyna-	by a	ween	reast.
Accident in Brief.	Fatally scalded by steam and water while	water while	ngming a mine me.  fightelly scalded with the mine fight with the mine fight.	nguing a mine me.	Ratally injured by Iall of coal from rib	In gangway.	Instantly killed; struck on head by fast	revolving beit coupling. Instantly killed by fall of bone in breast. Instantly killed by rush of coal on strip-	chute.	Fatally injured by flying coal from shot	in breast. Instantly killed by fall of rock in airway. Fatally inkilded: run down by a loaded	trip of mine cars. Instantly killed; crushed between gondolas	under breaker. Fatally injured by an explosion of dyna-	mite in gangway. Fataily injured by being run over by	loaded trip. Fatally injured by being squeezed between	Formula and meaker want. Fatally injured by fall of slate in breast. Instantly killed by fall of top coal while robbing pillars.
Accide	m and	Fatally scalded by steam and	m and	m and	of co	ng coa	c on h	E. of bor	Fing. Sniothered by rush of coal in chute.	ng coa	of roc	d betw	explosi	ng rur	sdnee	of slat of top
Nature and Cause of	y stea	y stea	y stea	y stea	by ial	by flyi	struel	revolving beit coupling nstantly killed by fall o nstantly killed by rush	sh of c	by flyi	y fall	rs. crushe	oy an	y, by bei	y being	gondona and meaker wan atally injured by fall of s istantly killed by fall of robbing pillars.
nd Cau	atally scalded by ste	alded b	ngnung a mine me, atally scalded by ste	ngheing a mine mer atally scalded by ste	atally injured by 18	jured	killed;	cilled	by rus	jured	t. tilled 1 jured;	trip of mine cars, istantly killed; cri	aker. jured l	angwa jured	ured b	ured brilled billars.
ture	ully se	nung Hy seg bring	nung illy se	nting diy se biing	ally in	atally injure	istantly kille	antly l	ng. thered	illy in	oreast antly ki ally inf	p of mandly l	under breaker atally injured	te in g	atally injure	ataily injured last and marked last antily killed robbing pillars.
		Fata	Fata	Fata	Fats	Fats						Insta	Fata	Fata	Fata	
County	Carbon,.	Carbon,	Carbon,	Carbon,	Luzerne	Carbon,	Luzerne.	Luzerne Carbon	Carbon,.	Luzerne,	Luzerne,	Luzerne.	Luzerne,	Carbon,.	Luzerne,	Luzerne, Luzerne,
Colliery		:	:		:		Jeddo breaker No. 4,	Cranberry No. 1, Lans'ord No. 9, Shepp's	Shepp's	Stripping.	Highland No. 5, Drilton No. 2.	:		shaft,		No. 1,
0f C0]	No. 4,	No. 4,	No. 4,	No. 4,	No. 5,	:	ker N	No. 1.	6		No. 5,	shaft,	No. 1,	ing		No. 5,
Name	Lansford No.	Lansford No.	Lansford No.	Lansford No. 4,	Highland No.	Coleraine,	o brea	Cranberry No. 1.	stripping. Lans ord No.	stripping.	Highland No. 2.	Hazleton shaft,	Cranberry No.	Nesquehoning	No. 1. Lattimer,	Highland   Highland
	Lans	Lans	Lans			Cole	Jedd		Lans	Latt		Haz	Cran	Nesd	Latt	High
Number of orphans	9	9	9	:	_:		2	es :	:	-4"	: :		ro.		_ :	e :
smobim to radmuM					: :	I. 1	M. 1	M. 1						:	<u>:</u>	S. Z.
93A	42 M	4S M.	38 M.	30 S.	81 83	30 M	38 1	42 N 64 D	58 M	2S M	22 49	45 M.	34 M	16 S.	.S.	33 8
	-		:				-		:	71	27	4			- 2	
Occupation	Supt.,	foreman	:	:	.: :	i	m m.		:			.,	:	oy,	ader,	
	Asst.	Asst.	Miner,	Miner,	Laborer,	Miner,	Platform man	Miner,	Miner,	Miner,	Laborer,	Laborer,	Miner,	Door-boy,	Coal loader	Laborer,
	an,	an,	an,	:	:	ian,	ian,	::		:	1,		:	an,	:	
Nationality	American,	American,	American,	Polish,	Polish,	Hungarian,	Hungarian,	Italian, German,	Irish,	Italian,	Tyrolian,	English,	German,	American,	Italian,	Polish,
uo		:	:			:		rau,	ns,	ci,			-	× ×	:	
	est, .	:	is,	gle,	11,	ovish	hko,	ttera	mme	ntuc		iams		Į.		n,
. of	d We	Black	Lew	Porna	Kruta	Jark	Mis	Rui	s Cle	d Sa	Corra	Will	Crasc	t Mc	ram,	Klu
Name	Richard West,	John Black,	Daniel Lewis,	John Fornagle,	John Krutal,	John Markovish,	Joseph Mishko,	Joseph Ruff,	Thomas Clemmens,	Leonard Santucci,	John Corraza, Peter Shovlin	David Williams	John Krasch,	Vincent McGorry,	Neal Tram,	Frank Kluck, James Quinn,
	21	21	21	21	-	9	2	10 8	=======================================	13	200	62	9	22	28	17
Date of accident	June				July							Aug.				Sept.

18   Ferdinand Bonnan,   Austrian,   Miner,   34   S.       Buck Mt. tunnel No. 2.   Luzerne,   Sufficented by rush of coal in chute of	uzerne, Entally infured by accidental discharge of	Luzerne, Fatally injared by accordental discharge of	Carbon, Fadally mand by being squeez d by tween	Luzeme, Fatelly upmed by fall of rock from top	Luzerne, Faraliv and was premature explision	Slavonian, Luborer, 37 M. 1 ('ranhe'riy, Luze'rne, Fateriy mjaned by iadi of elay in Steire-	American, Bottom man, 19 S No. 5 shaft, Lansford, Curbon, Landson which be the right and	Carlo L. Fatally figured by being outsite in sessions.	Luzenne. First verticed by fall of top slate in	Luzerne, Francisch infined; run over by cae of tim-	Luzerne, Fruity introduction study of from day	22 Neal Gallagber,, Irish, Mner, 42 M. 1 4 Lansford No. 6, Carbon, Instantly killed by fall of datains state.
Buck Mt. tunnel No. 2, L	. Hazleton No. 5, Luzerne.	August Clemmente, , Austrian, Laborer, 27 S Hazleton No. 5, L	English, Miner, 77 M. 1 Coleraine, O	Austrian, Miner, (3 M. 1 Lattimer, L	German, Miner, 69 M. 1 Upper Lellich No. 5, L	Craub rrg, L	No. 5 shaft, Lamsford C	Hungarian Miner, 93 M. 1 1 Beaver Brek, 15 American Co. No. 4 Langloid, 15 S. 17 No. 4 Langloid, 17 C. 17 No. 4 Langloid, 17 C. 17 No. 4 Langloid, 17 C. 17 No. 4 Langloid, 17 C. 17 No. 4 Langloid, 17 C. 17 No. 4 Langloid, 17 C. 17 No. 4 Langloid, 17 C. 17 No. 4 Langloid, 17 C. 17 No. 4 Langloid, 17 C. 17 No. 4 Langloid, 17 C. 17 No. 4 Langloid, 17 C. 17 No. 4 Langloid, 17 C. 17 No. 4 Langloid, 17 C. 17 No. 4 Langloid, 18 C. 17 No. 4 Lan		American, L. co, patcher B S Lattimer, Lo		Lansford No. 6,
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v.	Ŋ.	ń	M.	M.	M.	M.	Ý.	F 3.	N	1	77	M
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Miner,	Miner,	Laborer,	Miner,	Miner,	Miner,	Luborer,	Bottom man.	Miner,	Miner,	L co. patcher	Lab rer	Miner,
Austrian,	Austrian,	Austrian,	English,	Austrian,	German,	Slavonian,	American,	Hungarian,	Polish,	American,	Hungarian,	Irish,
Ferdinand Bonnan,	Joseph Poncare, Austrian, Miner, 24 S		Thomas Bowden,	13 John Guffler,	August Horn,	Metro Stevorick,	24 John MeLaughlin,	Paul Colleser,	14 John Birbotski, Polish, Miner, 2: M 1 3 No. 2 Print m,	14 Patrick Ducke,	18 Michael Telshoko, Hungarian, Lebover, 25 M 1 1 Bekley,	Neal Gallagher,
18	13	19	24		53	31	F.7	27	14	14	18	22
				Oct.			Nov.	Dec.				

TABLE 5.—Ninth Anthibracite District, 1503 Non-Fatal Accidents in and about the Mines

Status, as conserved Avendent in Briet	Fack benesal by rad of eled in breast,  Fine- adjured by having it caught be- tweer leaven for and diff car.  For an ok and breast burned by small  For a gas in here st, burned by small  For thertheed and here breast by calling  Thom platform in hereast, an exercise			were ditter fulfilms on time. Were ditter flatter out over left eye by direct out of an a shot. Left or outside the being caused the being caused the being caused the being of the cars at hotten of the are the being therewe by the being there has the outside the attempted to hard.
C) anty	Luzerne, . Luzerne, . Luzerne, . Carbon,	Luzerne, . Luzerne, . Luzerne, . Luzerne, .	Luzerne, Luzerne, Inzerne, Carben, Luzerne,	Carbon,
Name of Call ay	Harwood, Upper Lehgh, Jeddo No. 4, star washery,		Highland No. 2.  Orabberty No. 1.  Coloraine,  Cranherty No. 1.  Cranherty No. 1.	M. Beaver Mendow, S. Hazle Brook.
ofgnis to boltank	Zi zi zi zi zi	N N N N N	wick of Rich	
92A		7 8 8 8 4 8	888 288	# C C
Occupation	Muner, Muner, Muner, Elevator boy,	Dilver. Laborer, Miner. Laborer	Miner, State pister, Fireman, Miner	Minor, 411  Hitcher, 26  Mot or watchman, 19
VilianoitaX .	Hu, gaetlen, . Stavonian, . American, .	American, Italian, Italian, Itennan, Slavonian,	Polish, Polish, German, Am vi sh, German,	Hungarian, Italian,
to to the control of	Martin Christian, Andrew Makutu, M.Re Mikula, Charles Delaus,	Albert Galleski, James Bassi, Ardrew T litts r, Herman Grossman, John i vectz	Egnots N wobbit, Mattis Novobat William kitagor, John Pugan, August Klinge,	24 Mike Cundra,
); :				Mike Pasc
·		E E E E E	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	27 24 24
in the first roto out.(1)	, dan,	Ţ		

Squezed between car and door trense	on gangway while on his way home. Face and Lands burned by small body	of gas in chute. Face and back and body	of gas in chute. Less fractined by fulling from Freaker to	ground, 31 to t Skild itsetured by a flying piece of e al	term shit, to the time time of beautifully disting	esal from a shot. Head cut by a full of top slate at free-	of by pst. Less tracefuled by dyong conflictions a slight	In located by a stock of timber be in-	the rate of and borns on hand and fac-	le stat e ne al Wi, e tangere,	Long, and by modestriking kern Long to the Holy Holl of the contraction	Fig. 4. See H. 1 control by find of conditions of the same start o	Also for med by Lore Course, in	mult. See a correct of the factors of the research of the research of the factors of the research of the resea	Responding to the state of the	Will both on the Source of the Caller	Continued by posterior of the Spect	London Hyalter of collection	The All Alberts I will be booked.	The state of the s	Principles of the second constraint of the second constraint of the second control of th	्डा र मार्ग्य है। यह जिल्ला के फ्रिड कर्या बड़ा कि	Nicolar Collando de Comercia. Xivernation a del control de appresentation de control de appresentation de control de cont
Luzeine.	Carbon,	Carbon,	Luzerne, .	Luzerne.	Luzerne,	Luzerne, .	Luzerne.	Luzein	Luzopne, .	Luz rn	Luzerr	Luz me, Ca, bon,	Carlo II.	Lvs .nv.	LUCATION.	Carlen.	"April or In.	Lumn,	Luzerme	I. tzerbe	Lezem. Luz-m.	- N. D. T	
Hazte Breck,	Lamstord No. E	Lanstord N. t	Harwa d,	Hazleton No	East Chystal Retails	J. 44 - X - E	Hazaten did	Hawad,	Highland N. z	Juddo No. 1, company	Health N 12 New York	Harden Strategies H	Byars cellery,	Crand crey,	Hazi ten sheft.	State Name of State o			To be Date of the	3 ed - 7 - 5 - 5		N Carried	M. Joddy Ne. 3
7.	M.	v.	<i>y</i> ,	M.	M.	<i>y</i> .	y <u>.</u>	٠,	<i>5</i> .	у.	У.	7.7.	N.	7. 7.	· /.	NN	M	N.	y.	M	23.	· .	7.
81		- 1	11	ć:	? <del>?</del> .	61	10	î î	ći.	1	ā.	1514	1-	6-33 -	ĝ.	5.60	2.1	2.1	÷	2.1	21%	c:	· %
Mini-r.	Mimer, M.	Laborea	State pleker	Miner,	Miner,	Mimer.	Muner,	Laborer,	Minet.	11.10 1.11	Mar.	Local Trues.	Russia E	Lade rere	Lide Perior	Miner, Lib rer,	I ullestration.	The test	Office Toy,	Tunni a and	Misser Misser	Miner	Country in sile.
American, .	Hungarran, J	Hungarian, .,	Hung m.dt.	German,	Griman, Miner,	Hamsarim	Polich,	Italien,	Po'r. h,	American, Hitcher	Labele.	Huner, len	American Burners.	Herman H	Polli.	Libranian	Hater on, Indepen	Burners, Inden-	And the state of	Hi ranian,	Pell, Person and Misser Are et green, 1967, 3	Intro et an, .	) Is ad. (
What Hunsinger,	Jeseph Kocko.	Parl Kezlick,	And w Table,	J dra Sunarock,	Paniel Ruport,	Albert Wiegens,	John You levist,	Ant his Croetto,	18 Gorge J blomski,	Sown I We dring,	loles J. Gallagh J	John Mattoln There as C. T. Heen, J.A.	Julius F. College, and accompanied	J. G. v. Gerska,	to the March Co	J. D. Marthenvish,	25 John Kimavish,	J hn Steache,	1 Jacob H. Cuckermath,	to the year year.	Congression of the constant of	Story - Line of the story	standay Indiana
- :	1-	11-	1:1	13	22	1	<i>:</i> -	1	-	5.7	Ži.	03 49	10	1 - 1	-	1-2	45	Ē	wes	-	F }}		ঘ
Mars h												Aprel							Miss			J	

TABLE 5-Continued

Name of Person   LP	Nature and Cause of Accident in Brief	Arm and ribs fractured by a car sent down slope without the rope striking	bim. Foot crushed by having it caught be-	Ankl: fractured and contusion of left foot by a fall of slate.	Leg crushed; caught in pinions on	Dreaker, recessitating amparence	Foot crushed. Run over by empty car.	Hand and foot lacerated; caught between	ear and breaker wall. Leg fluctured by fall of slate. Arm fractured: struck by piece of coal	whin rolled down chute. Leg fractured by fall of slate in breast. Ribs fractured and head cut by fall of	bone in breast. Fracture of pelvis: struck by mine loco-	Skull fractured, jaw bone broken and one	Hip dislocated, Fell in attempting to	Face and hounds burned by powder while	Hands and the burned by an explosion	Back and foot injured; caught by descending car on slope.
Name of Person   Page	County					Carbon, Carbon,		Luzerne,		Luzerne, Luzerne,	Luzerne,	Luzerne,	Luzerne,	Luzerne,		Luzerne,
Name of Person   Page	Name of Colliery	Breok,	Upper Lehigh,	S.S.		Lansford No. 4.	No. 2,					No. 1,	No. 5,	Ebervale,	5,	Upper Lehigh,
Name of Person  Andrew Skuntz,  Mattrakites,  Mike Mattie,  Mike Mattie,  Mine Mattie,	Alarried or single	ιά	vi	N. N.	υż	တတ်ပ	င် ဟဲ တဲ	oi.	N. Z.	Z si	M	νi	vi	M.	M.	Ä
Name of Person  Andrew Skuntz,  Mattrakites,  Mike Mattie,  Mike Mattie,  Mine Mattie,	934								_							
Name of Person  Andrew Skuntz,  Andrew Goodlick,  Martin Wargo,  Martin Wargo,  Martin Margo,  Martin Landach,  Person Parko,  Pritz Landach,  Wilstan Hothe,  Miliam Hill, Jr.,  Miliam Hill, Jr.,  John Brepne,  John Brezn,  John Brezn,  John Rezeln,  Joseph Sciwell,  Samuel Hodgson,  Orbarles Gillespie,  Charles Gillespie,  Charles Gillespie,  Lewis Delmonica,  Rassius Hinko,  Reston Minnich,	nolisaquooO			1.					Miner, Laborer,			:	:			Repairman,
Name of Person Name of Person Name of Person Name of Person Nation Name Nation Name Nation Name Nation Name Nation Name Nation Name Nation Name Nation Name Nation Name Nation Name Nation Name Name Name Name Name Name Name Name	Nationality	Slavonian, .	Hungarian, .	Hungarian, .	Hungarlan, .	Pelish,	German, Hungarian, .		American,	Polish,	American,			Italian,	Hungarian,	American,
10001219 10 21P.T	P4		ick,			Joseph Pasko, John Vitiek,	Wibsam Rothe,	Jr.,	: - '4	ದ	Joseph Seiwell,		:		Blasius Hinko,	
	Date of accident	11	11	16	20	255	July 3	21	22	29 Aug. 3		9	10	27	81	Sept. 4

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Leg fractured by fall of coal in breast. Face, and bruds slightly burned by an explosion of gas, Ankle fractured is struck by sheet from which slied awn putch. Leg fractured by piece of machinery falling on him. Then coal by piece of coal falling, strike in the face of the strike in the face of the strike in the face of the strike in the face of the strike in the face of the	the properties of the proof while robe in the proof of th	two miles below.  The many constrained of a sight between humbers which constrained by piece of constrained by the constrained by props.  The many props.  The	of so
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Fatal Accidents - By Falls of Coal, Slate and Roof.

By consulting Table IV, it will be seen that during the year 1903 fourteen employes lost their lives through falls of coal, slate and roof. Some of these accidents occur not through ignorance of the victims, but rather through recklessness on their part. They may know that the top is unsafe, but instead of leaving all other work and taking it down, they trust that it will stay there a little longer, until they load a car or drill a hole. They may go right under it, start to drill the hole, when down it comes, fatally injuring or perhaps killing them instantly. Miners should stop to consider that the most important part of their duty is to take care of themselves and their laborers, who are under their charge, and when they find that the roof under which they are working is unsafe, they should stop all other work and take it down at once. If this was done we would have fewer accidents of this kind to record.

Another very important matter I desire to impress on the mind of the miner is the fact that when he discovers that his roof is bad and he tries to take it down, he should not leave it again until he has it down or a set of timber or a prop put under it to make it secure. On this point I would say that during the year it has come under my observation, when investigating accidents, that a person has been killed under a piece of top which he knew to be bad and earlier in the day had tried to take it down and failed. He left it and went about other work, forgetting that during the time he was engaged doing other work the piece over his head was working all the time and becoming weaker the longer it was allowed to stay there, and when not expecting it, down it comes, instantly killing or fatally injuring the person who happens to be under it. The expression that they are very ready to make is—"that the piece fell without any warning." Now this is not the case, as I claim that the piece had been giving warning ever since it was first discovered unsafe and if they had put a prop under it, or taken it down at the time, the accident would have been avoided. One instance of this kind occurred at Drifton No. 2, where John Binkopski, a Polish miner, lost his life by a fall of slate in his breast or chamber. He and another miner were working "partners," and when they went in to their work in the morning they discovered that there was a crack in the top slate. Binkopski tried to pull it down and not being able to do so he called his partner, telling him to bring another bar, to see if both of them together could not pull it down. This also failed and feeling secure they started to make coal for the day. One hole was drilled and fixed and the surviving partner said that after firing this shot they again tried the top and found no difference in the condition of the He then started to drill another hole and deceased was

shoveling could ack when this piece fell, killing him instantly. It can readily be seen that had these men persisted in getting it down when they knew it to be bad, even if they had to per a shor in it, this accident would have been avoided.

Accident No. 39, which occurred at Eckley, is another instance which proves that when a jerson starts to take a piece down he should not leave it until he has it down. In this case George Peckar, a miner, was engaged in robbing pillars. He discovered a bad piece of coal hanging over a pillar paccording to the testimony of his partner) he took a drill and tried to bar it down. It did not come down as readily as he thought it would and he decided to drill a hole in it and blow it down. About that time an empty car was run into their branch and Peckar left the hole and went to assist his partner to load same, and shortly after the piece which he had tried to get down fell of its own accord, instantly killing him. Had he left the car stand on the branch, or told the driver that he did not want a car that trip, and continued drilling his hole and fired it, this accident could have been avoided. A very strange thing about these accidents by falls is that so many of them occur in small seams, where a man can put one hand on the piece which he is sounding while he holds the drill or bar in the other and taps the top. In this manner it is easily detected if there is any movement in the piece which he is sounding, yet all the accidents which occurred in the district by falls, occurred in small seams, where it would be easy for them to carry out the above precautions, and I am satisfied if they were carried out that the accidents by falls would be greatly lessened.

Another strange thing about these accidents is that they occur where the roof is not considered very bad, but a fairly good roof, and from this fact I would say that the roof not being so bad the miner takes chances which he ought not to take. If the roof is bad he will not take any chances at all, but will put up a set of timber, a prop, or he will take the bad roof down at once, because he knows that it is not to be trusted.

### By Mine Cars

Five persons met their death by mine cars underground. The first, a young man by the name of Albert Stabert, lost his life by being run over by a trip of empty mine cars at Hazleton No. 1. He was driving a four mule team and was leaving the bottom of the slope with a trip. The team was not going as fast as he thought they should go. He placed his lamp on the spreader and ran up alongside of the leader to give her a few outs with the whip. When he had them going fast enough he stepped to the side to wait until

cars came up to him. His lamp had been thrown off the spreader and there was no light except what was thrown from the lamp on the lead mule. He attempted to jump on the front end of the rapidly moving trip, slipped and fell under, and was instantly killed. When he saw that his lamp was gone he should have stepped to one side, as there was plenty of room to let the trip pass, and he could have easily caught the team after he bad picked up his lamp. I have often seen drivers place their lamps on front end of car and run up alongside of the mules in the dark to stir them up, but I never saw any one put his lamp on the spreader for this purpose. He might have known that the jerking of the spreader would throw his lamp off.

Peter Shovlin, an old miner, while on his way home out the gangway at No. 2 Drifton was fatally injured, he being run down by a loaded trip of mine cars. Deceased and his partner were on their way out when they encountered a motor trip of twenty-three loaded cars which had stopped to push four cars into a branch (the turnout being only able to hold nineteen cars), and were stopped by the motor patcher, who had placed sprags in the trip from the fifth car back. The patcher after uncoupling the four cars gave the engineer the signal to pull down and as soon as there was a little space between the trip that was moving and the nineteen cars standing, Shovlin and his partner stepped out into the road and continued their way out. Just then the patcher noticed the nineteen cars moving and shouted to them to look out, that the trip was coming. Shovlin's partner stepped to the side where he was walking and saved himself. Shovlin, who was walking on the other side, attempted to get to the side where his partner was and was knocked down by the trip and fatally injured, as stated above. I am of the opinion that Shovlin got confused when he heard the patcher shout to him, as there was no necessity for him to run across the track, he could have stepped to the side which he was on and saved himself.

Vincent McGlorry, a young door-boy, lost his life in No. 1 shaft, Nesquehoning, by being run down by a trip of loaded cars which was being pulled out to top of balance shaft. His duty was to tend a door which was on this gangway, but at the time of accident he had gone in with the driver to assist him, this being the last trip for the day. When nearly out to his door he ran ahead, but when passing the mules he was pushed by one of them, causing him to fall. He hung on to the trace for some distance and was dragged along, but the driver was not able to stop the trip in time to save him. His hold on the trace slipped and he fell to the side of the road and was fatally injured. He was removed to St. Luke's Hospital at Bethlehem, where he died thirty-six hours after the accident.

Thomas Bowden, an old English miner, was injured between an

empty car and rib at the bottom of No. 9 slope, Coleraine. He and two other men came out to the bottom of slope to be hoisted up. Bowden stood on the side of rapper and through some cause the car jumped the track, catching him as above stated. The injury was considered nothing more than a fractured leg at the time, but resulted in his death a few days later.

John McLaughlin met instant death at No. 4 Lansford. A locomotive was pushing a loaded trip into bottom of shaft and deceased was walking on the side of the front car of trip for the purpose of spragging trip, the car jumped the track, caught his head between car and side, killing him instantly.

### By Explosion of Dynamite and Powder

Four men lost their lives by the reckless handling of dynamite and black powder. One of these, Patrick Burke, an old experienced miner, lost his life by a spark from his lamp flying into a cartridge of powder, which he was filling. He had placed two sticks of dynamite into the cartridge and was filling it up with black powder when the spark flew into it, causing all the dynamite and powder which he had in to explode, killing him instantly.

John Krasch, a German miner, lost his life by ramming dynamite into a hole that was too small to receive it. The hole was drilled in the bottom slate and was started by a rock machine. When the hole was in about two feet it struck a sulphur ball, which the machine would not drill and they took the machine of and drilled the balance of the hole with hammer and steel. The drill which they used to finish the hole with had been used for some time and the bit was worn smaller than the dynamite and in charging the hole he removed the paper from around the sticks of dynamite and rammed them into the bottom of hole. In this manner he had placed five sticks in the hole, using a heavy scraper, and while ramming the sixth stick it exploded the charge, injuring him so badly that he died before reaching home. A driver-boy, by the name of Samuel Hodgson, was also injured very severely at the same time. He had gone into the gangway to see how many cars they wanted for the night and was sitting down watching Krasch when the dynamite exploded. The laborer, who was back on the gangway gathering tamping, escaped with a few slight scratches.

The other two men who lost their lives by dynamite were Joseph Poncare and August Clemmente. These men were working on the night shift, also in a gangway, in No. 5 slope, Hazleton shaft colliery, and in some unknown manner, while charging a hole it exploded. I was unable to determine exactly how this accident occurred and referred the matter to a coroner's jury, who also failed

to find out the cause of the explosion, they rendering a verdict—"That they came to their death in some manner unknown to the jury."

### By Blasts, Etc.

Three men lost their lives by blasts during the year. Adam Maczek, a Russian miner, lost his life at Sandy Run. He with several others were engaged in opening up an old gangway which had caved. In doing this work they encountered large rocks, which to break them into pieces small enough to handle required drilling holes in them. Deceased and his partner had drilled four holes in these rocks and had charged them ready to fire. Maczek was to light two of the holes and his partner the other two (they were using fuse). The partner ignited his two shots and ran back to a place of safety. Maczek succeeded in lighting one shot and went to the other to light it, but this shot did not spit and Maczek waited at the shot trying to light it as long as he thought it was safe (the other three fuses burning) and then he ran back to where the other men were, thinking that he did not light this last shot. He waited there until they heard three reports and then he started back to light the hole which he thought he had failed to light. The men told him that he had better wait awhile to see whether it would not go off, but he would not listen and rushed back and got there in time to receive the full contents about the head and body, killing him instantly.

John Markovish, a Hungarian miner, was fatally injured at Coleraine by a blast which blew through a pillar. I could readily excuse the men in the breast below for this accident. They were working a breast from a gangway below the one that the victim and his partner were walking out on their way home, and under the instructions of the foreman had drilled a hole eleven and a half feet ahead of them and did not strike the gangway. They then drilled a four foot hole in another part of the breast, which they thought would be perfectly safe in firing, and did so, with the result that the whole load of this shot was thrown to the gangway above, fatally injuring Markovish, who was nearly opposite the place where it broke through. (The test hole did not go through owing to an abrupt curve in the gangway above).

The most fool-hardy act that ever came under my observation was accident No. 88, which occurred at Lattimer, when Leonard Santucci met his death through a rash act of his own, he trying to fire a four foot hole with two feet of fuse that he might save a penny. He ignited the fuse before inserting it into the hole, then ramming five cartridges of tamping in after it, and before he left the place the charge went off, fatally injuring him. How to prevent accidents when men will take chances of this kind is beyond my comprehen-

sion. This was indeed a very fortunate accident, if it can be called an accident, for his laborer had only got below the check battery or he would have received the same fate. A driver who was passing at the time had a very narrow escape from being injured by flying coal. The men working close by ran up into the breast, expecting to find his lifeless body, but it was not to be found up in the breast. They then looked on the gangway and could not find it there. The driver then went out and found him on a truck, where he had been thrown from the breast when the shot went off while the trip was passing. He died on the way to the hospital.

### By Falling into Shafts and Slopes

Two men lost their lives under the above heading. John Kosh, a Polish laborer, lost his life by a flagrant violation of the mine law, in attempting to get on a cage in excess of the lawful number at the counter of the underground shaft of the Spring Brook colliery. Deceased, with two others, had come out to the shaft and was waiting to be hoisted up. A cage load of men came up the shaft and the engineer had a signal to go all the way through. One of these men gave the signal to stop the cage at the counter and when the cage arrived at that point the men standing there were told by the men on the cage "to let it go up, that there was a load on," meaning ten men, but notwithstanding this the two men on the other side from the bell wire attempted to get on, but Kosh, not being properly on the cage when it started up, was caught by the first set of timber above the counter and pulled off, falling to the bottom. When picked up he was dead.

The other victim was a young man by the name of August Bechtel, Jr., who fell down a balance plane in No. 1 tunnel, Nesquehoning. His duties were on the side where the loaded car is run on to cage to bump the empty car off, but just prior to the accident he was called to the other side to assist a driver to push some empty cars which were blocked. When going over to the empty car side he used the regularly traveled way, but when returning he walked into the plane. How he came to do this is a mystery. The only way that I can account for his doing this is that he must have forgotten himself. The foreman had placed a man with him to ac quaint him with the work that he was expected to do and was to remain a few days with him, but, unfortunately, he met his death the second day. The plane has a pitch of 65 degrees and is two hundred and ten feet long. He struck the cage, which was at the bottom, and was injured so badly that he died shortly after the accident.

### Suffocated by Coal

Two men lost their lives by being suffocated by coal underground, one an old miner by the name of Thomas Clemmens. He and his boy were engaged mining coal in a stripping at Lansford No. 9. A side chute was driven off of main chute, which was also driven through to the stripping, and it was while going up this side chute that a rush of coal came down, caused by a heavy down pour of rain on the outside. Had they known how much coal was coming they could have stood where they were and would have been safe, but they made an effort to get into the main chute and were caught in the rush, the father going down into the chute, covered with coal and suffocated. The boy threw his arm around a prop and saved himself.

Another miner, by the name of Ferdinand Bonnan, met his death by a rush of coal which caught him by starting a battery in a breast in East Buck Mountain tunnel, and before he could be rescued life was extinct. This life could have been saved had one of the men had presence of mind and kept the coal from his face to allow him to breathe.

### By Mine Fires

Lansford No. 4 Fire.—On June 17th fire was discovered in No. 8 breast, curve gangway from east gangway of No. 4 slope. A party of men were at once put to work to try and extinguish it—one party to carry water up in buckets while the other party put the water on the fire. This was done to stop the progress of the fire until the men who were engaged laying a pipe line would reach the seat of the fire with water from the pumps, which are located near the bottom of the slope. This work was accomplished on Sunday the 21st. A line of pipe was run up in No. 8 breast and another up No. 7 breast. The line in No. 7 breast was to put water on the fire from above and the line in No. 8 was to extinguish the fire after it was pulled down to the battery. On Sunday night a party of men, composed of Richard West, assistant general inside foreman (who had charge of the party); John Black, assistant mine foreman; Daniel Lewis, a miner; John Fornagle, a miner, and several others, were engaged fighting the fire from No. 8 breast. Between nine and ten o'clock, through an oversight of some member of the party, the force of water from the hose was turned on to a large body of raging fire and immediately an explosion of some kind occurred, fatally scalding West, Black, Lewis and Fornagle, and seriously scalding Joseph Pasco, John Vitick and Fritz Laubach. This accident could have been avoided had these men continued to pull the fire down to the battery and cooling it off, or if they wanted to direct the water on to the

body of the fire, they should have turned the water off, pointed the nozzle where they wanted, fastened it there, and gone down to the gangway and turned on the water, remaining on the gangway until they were satisfied that the water was not reaching the fire. They could then have gone up and pointed the nozzle in another direction and done the same thing over. If this had been done I am satisfied that the accident would not have occurred. This was the method adopted after the accident and it worked successfully, but these things show themselves very plainly after the accident has occurred.

### By Cars Outside of Mines

Jerry Werley lost his life at Lansford No. 6. His duty was to run the cars after being loaded to the bottom of the refuse plane. One car had been run out from under the rock chute until the other car would be loaded and when he ran the second car out he bumped it against the first car. He then started both cars toward the bottom of the plane and shortly after starting them he discovered that he had not coupled them together. He got between the ears, placing a knee on each bumper, and reached down to try and catch the coupling, which was dragging. The front car reached a heavier grade and gained on the second car, causing the space to become too large for him to reach in the position in which he was, and before he could get a hold with his hand he fell in between the cars, the second car pushing him ahead until he reached a switch, where he became fast and the car ran upon him, injuring him so badly that he died the next day.

August Platt was instantly killed on April 1st by a small locomotive truck, on which he was riding to his work from No. 5 slope over to Hazleton shaft breaker, colliding with a Lehigh Valley Railroad Company train of cars being pushed into the breaker siding at about 6.30 A. M. At a point near the breaker the small locomotive track crosses the L. V. R. R. track to the breaker on grade. The first car of the railroad train was a large fifty-ton capacity ear, and had the engineer of the small locomotive been looking ahead I think he could have easily seen the cars being pushed up into the siding. Again, it was an unusually early hour for the railroad people to send a train into the breaker, and from this fact I think they should have sent a flagman to watch the crossing when they were pushing their train up, as they knew this was done during the day, and as this train was being pushed up before the men of the coal company were on duty. They should have looked to this. In the collision the small truck on which Platt and others were riding was thrown over, killing Platt, as above stated. Notices are posted in all the locomotives of the Lehigh Valley Coal Company prohibiting the riding of any person, other than those whose duty calls them to do so, and had this notice been obeyed, the accident would not have happened.

Joseph Christ, a laborer on stripping, was fatally injured in attempting to cross a track in front of a loaded stripping car which was being pulled out from the steam shovel. He alone could have avoided the accident. This occurred at the stripping of N. J. Cuyle & Son, No. 6, Hazleton.

Frank Petro, another laborer on stripping at Beaver Meadow, whose duties were to run cars into steam shovel, was fatally injured by stepping to the middle of the track to apply the brake on a car which was moving before he was ready. Two other cars followed in, which he did not notice, and he was caught between the bumpers and fatally injured as above stated.

James McNealis, a young man engaged as topman at one of the planes of the stripping operations of T. A. Gillespie & Co., met an untimely death by being crushed under cars, and was so badly injured that he died four hours later at the hospital. On this plane a locomotive and three leaded stripping cars were being hoisted, the locomotive being in the rear, so as to be ready to keep the cars going after reaching the top of the plane. The deceased jumped on front end of the train when it came to top of plane and rode for some distance, until the locomotive reached the apex, then threw the rope to one side and jumped off. In jumping he landed on a piece of coal (which was allowed to remain too close to the track), which threw him back against the cars, which knocked him down and injured him as above stated. The matter was referred to a coroner's inquest, who censured the company for not having more light on top of plane, so the boy could see where he was jumping in alighting from the car after throwing the chain. The accident occurred at night time.

David Williams, a laborer, was instantly killed by being crushed between two gondolas under the Hazleton shaft breaker. Deceased and a man by the name of Henry Blackwell were trying to bar an empty gondola from over the condemned coal pit. Williams had been using the bar and was unable to move the car and Blackwell told him to give him the bar, which Williams did. Blackwell stood at the side of the track barring, the deceased standing in the middle of the track watching him. The car runner (who did not know that they intended to bar the car off the pit) had gone up to run a loaded car of condemned coal down to be placed on the pit, and the brake being on the back end of car, he was unable to see the men who were trying to bar the other car away. Williams, as mentioned before was standing in the centre of track watching Blackwell, and was caught between the two draw-heads, crushing out his life in an

instant. The car was run down quicker than they expected, or else they forgot that the car runner had gone up to run a car down. It was an unusual thing for them to bar a car off of the pit, as it was their custom to bump them off, but owing to another car standing a short distance below which they thought would be disturbed by the bump, they were trying to bar it off. Therefore it is readily seen how this accident occurred.

Neal Tram, an Italian coal loader, was fatally injured by being squeezed between a gondola and a platform which ran along side of track under Lattimer breaker. The had gone up to run a car down and after starting the car he ran alongside of it until close to the breaker, when he attempted to jump on. He was caught between the platform and gondola with the above result. He did not give himself time when he jumped on to get in between cars to get at the brake.

Patrick Burke, a young Locie patcher, was fatally injured at the same colliery by being run over by a mine car partly loaded with timber. They were going to make a "flying switch" to send the car into No. 8 slope. The boy had uncoupled the car from the locie and was crossing from one side of the locie to the other side to get at the switch and in some manner he slipped his hold and fell in front of the car, the car running over his legs and injuring him so badly that he died at the Hazleton Hospital about five hours after the accident.

It seems very strange that more accidents occurred during the year by cars on the surface, where they have day-light to do their work by, than underground, where they have nothing more than the light given by an ordinary miner's lamp. It is evident that the men and boys handling cars inside exercise more care than these handling cars on the surface.

### By Breaker Machinery

I regret very much to say that during the year three breaker boys lost their lives on the breakers by going into places where they had no business. One of these boys, Wash Thear, was ground up by the rolls. His duty was to see that a chute leading into the rolls did not get blocked, and to do this he was provided with a scraper and shovel, but instead of using either of these tools he got into the chute and was pushing the coal down with his feet, taking hold of side of chute with his hands. In some manner his hold slipped and before he could secure himself he slid into the rolls and was instantly killed.

Another boy, a jig tender on the same breaker, Foster Smith, went to put some tar on a belt to prevent it from slipping. This he

tried to do when the machinery was in motion and in some manner his clothing got caught and he was whirled around by the shaft running the jigs. The machinery was stopped and when he was taken off life was extinct. He had only been away from his companions a few minutes when the errand boy saw him going around and gave the alarm.

The other, an oiler, by the name of Manus McHugh, was fatally injured by having his clothing caught in the cogs which run the screen. The boy in order that he might be able to play with his companions during the dinner hour started to oil the machinery of the breaker about eleven o'clock, so that he would be finished before the noon hour. This work he had nearly completed and when getting down from the plank walk, which ran along in front of the screen, his clothing caught as stated above, and he was drawn into the cogs and injured so seriously that he died the following day. There was no one to blame for the accident but himself, as he had no business oiling the machinery while it was in motion, but boys will be boys and must play, and unless they are held under by strict discipline and prevented from doing things which are against the law, accidents of this kind will happen no matter how much we deplore them. It is indeed sad when we are called upon to record accidents of this nature.

Another accident by machinery occurred at No. 4 Jeddo breaker of G. B. Markle & Co., on July 8. Joe Mishko, a Slavonian platformman, lost his life in the following manner. The rock chute became blocked and Mishko went down to start it. On the other side of the chute, at the place where he intended to start the chute, was a fast moving belt and why he went over to that side is a mystery, as he could have started the chute from the nearest side better than from where he stood. He must have put his head up and a coupling on the belt struck him on the head, knocking him down into the rock chute and he went down with the rock which he had just started.

### Miscellaneous Causes Outside

It is to be noticed that under this head seven accidents occurred in this district. The first, John Clemkaski, employed at bottom of breaker shaft at the Beaver Meadow colliery of Coxe Bros. & Co., was fatally injured in attempting to cross from the east side of shaft to west side while the cages were in motion, the descending cage not more than twenty feet above him when he made the attempt. He took hold of the guide of the shaft and intended to swing himself across to the other side, but before he accomplished this the cage was upon him, crushing him down into the cage pit,

injuring him so badly that he died the next day. This accident was nothing less than suicidal on the part of the victim, as under no circumstance should he have used that way to get across the shaft, for by taking a few steps more he could have crossed by the regular way, provided for that purpose, in safety. The victim while on the way to the hospital stated to the attendants who were with him that he had a premonition that something was going to happen that day.

Clinton Williams, a young man, met his death in a peculiar manner at Jeddo No. 4, G. B. Markle & Co. Deceased, with several others, were engaged in raising a stack. The stack gave a lunge and caught Williams' hand between stack and the wall. The accident was considered of a trivial nature, as the boy was able to go to the doctor's and have the injured hand attended to, but in a few days lock-jaw set in and he died a week later.

A very sad accident occurred at Thomas Crawford's stripping when James Patton, a foreman, met an untimely death by a fall of clay from the edge of a bank. He, with some of the men under his charge, had been engaged in laying a track along side of the steam shovel and had nearly completed the extension of this track. Deceased was tightening a fish-plate bolt on one of the joints when a large mass of clay fell, catching him in a stooping position, killing him instantly. What makes this accident doubly sad is the fact that his brother was the engineer on the shovel and an eye witness to the sad occurrence. It was said that the attention of the deceased had been called to the unsafe condition of the clay some time before the accident, but evidently he did not think it was so bad or he would have had it taken down before starting to put in the track.

August Wetteran, an old German miner, lost his life by a rush of coal in Shepps stripping at Lansford. He had fastened a rope, which he had for the purpose of going down into the hole, when he got down and was putting coal into the chute. He must have laid the rope to one side and was using a drill to start the coal and more came down than he expected and he could not catch hold of his rope, he going down with the rush of coal. His body was not recovered for thirteen hours after the accident. The matter was referred to a coroner's jury, who rendered a verdict of accidental death.

August Horn, another old German miner, lost his life by a premature explosion of a blast in clay. Deceased was a foreman of a gang of men removing clay from a pillar of coal at Upper Lehigh No. 5 stripping. They had drilled a hole in the clay and had fired a few sticks of dynamite to spring it to make room for black powder.

He then poured about half a keg into the hole and instead of using enough fuse to reach outside the hole he cut a piece about three feet long, which he attached to a stick of dynamite with a cap in it. He dropped this into the hole and ran a tamping stick down immediately after. The stick evidently took the lighted end of the fuse down into the powder, which caused the shot to go off while he was standing over it, injuring him so seriously that he died the next day. There was no one to blame for this accident but himself, as under no circumstances should a person light a fuse before inserting it in the hole.

Metro Stevorick, a Slavonian laborer, was fatally injured by a fall of clay on the stripping of A. Pardee & Co., at Cranberry. The victim of this accident is again partly responsible for his own death, as it was part of his duty to trim down the loose clay in front of the steam shovel. This he, and others who were with him, failed to do and a piece of clay fell, with result as above stated.

Mike Telshoko, a Hungarian laborer, was fatally injured at the Eckley stripping by a large mass of clay which fell from the edge of the bank, striking a car and turning it over upon the victim. He was at once removed to the hospital, where he died shortly after reaching there.

I might say in conclusion of the remarks on fatal accidents, that during the year 1903, six of the fatal accidents occurred on the strippings of the district, to men not actually engaged in the mining or preparing of coal, but in removing clay and rock from the top of coal seams, and employed by men who have the removing of this material contracted from the coal companies, and it is a question whether these accidents should be charged to the mining and preparation of coal, but at present we have no other place to charge them other than to the coal companies who have engaged these contractors to do the work for them. These accidents are charged up as follows:

Coxe Brothers & Co., Incorporated,	4
Lehigh Valley Coal Company,	1
A. Pardee & Co.,	1

If these accidents could be charged against the removing of clay and rock there would be only forty seven accidents to charge to the mining of coal.

Improvements During the Year COXE BROTHERS AND CO., INC.
Drifton

New Boiler Plant.--The completion of a boiler plant of 4,500 H. P. capacity, Babcock & Wilcox boilers. This plant is a central one,

supplying steam for the operation of Drifton Nos. 1 and 2 collieries and other operations, such as Drifton shops, office heating, etc. The old boiler plant at Drifton No. 1 will be dismantled. The old boiler plant at Drifton No. 2 will be kept in proper repair as a matter of emergency.

Air Pipe Line.—The location of 5,500 feet air line, or from Drifton shops to their artesian well, for the purpose of hoisting water by air instead of steam.

New Water Supply.—The location of a new 100,000 gallon tank and 2,600 feet of six inch pipe line for the purpose of bettering fire service inside and outside of the mines.

Stripping Operations. -The stripping operations at the west end of the property have been continued during 1903. During this year 562,073 cubic yards were removed, making the total quantity removed up to January 1, 1904, 1,046,963 cubic yards. At this work seven steam shovels are employed and the material handled on seven independent planes. The mine track over which the coal is to be conveyed from the strippings has been extended to within 800 feet of the end of the stripping.

New Fan.—A large Clark fan, Guibal pattern, with 20 foot diameter plate 6 feet by 5 feet 6 inches, has been erected on the north crop of Drifton No. 2, Buck Mountain vein, about 6,700 feet west of the slope, which greatly improves the ventilation of the west end workings.

### Eckley

New Boilers.—At No. 11 slope, a boiler and hoisting house have been erected, equipped with two 100 H. P. Erie economic boilers, one pair double engines and drum, with one 50,000 gallon tank for water supply purposes. The location of one new 100 H. P. Erie economic boiler on Buck Mountain water line, which replaces two old locomotive boilers.

New Water Supply.—The location of 7,000 feet new water line from Porter House reservoir to the location of No. 11 slope (new).

Stripping Operations.—Stripping work has been continued in Eckley No. 1 back basin and Buck Mountain slope No. 2 Spoon end. At Eckley up to January 1, 1904, 512,445 cubic yards have been removed, of which 107,315 cubic yards were removed during 1903—one shovel being employed. Buck Mountain has removed 402,627 cubic yards, of which 58,237 cubic yards were removed during 1903.

New Slopes.—The water lying in Buck Mountain tunnel No. 2 works has been successfully tapped and lowered to the water level of the No. 2 tunnel. A slope, Buck Mountain No. 11, is being sunk to the old workings. Another slope, No. 12, is projected, which

will be sunk on the East Spoon end of old No. 6 slope workings, where again a large amount of coal is to be stripped.

### Beaver Meadow

New Dwelling Houses.—Erection of three two-family blocks and eight four-family blocks of houses for the use of their employes.

Air Compressor.—The location of an air compressor at No. 4 slope for the purpose of furnishing air for pumping and hoisting at No. 5 inside slope.

Stripping Operations.—Greenfield stripping has been continued, with two shovels employed, and 349,942 cubic yards have been removed up to January 1, 1904. Of this amount 149,000 cubic yards were removed during 1903. Hand stripping in the extension of No. 8 stripping was started in month of May, 1903, and up to January 1, 1904, 44,310 cubic yards were removed. The dams which were erected during the 1902 strike are still in, and prevent them at the present time from working the Temperance south crop strippings.

New Slope.—At Beaver Meadow slope No. 4, a slope was sunk inside to work the Wharton vein between the old No. 3 Wharton slope and the Coleraine property. Three levels will be driven to the west and two levels to the east of that slope.

Drainage Tunnel.—From the face of the Gamma gangway a second section of the drainage tunnel was started, which is calculated to be driven across to No. 2 slope, a distance of about 2,300 feet, and will tap the Wharton about 70 feet below the present working level. The second sections of drainage tunnel will be continued through a saddle into the old Temperance basin, and will develop the Wharton vein and the remaining Mammoth vein, which has not been worked below the old Temperance gangways.

### Stockton

No Improvements.—Has been abandoned, and only coal in the upper levels is worked and taken to Beaver Meadow for preparation.

### Tomhicken

No Improvements.—Coal is still taken to Derringer breaker for preparation.

### Derringer and Gowan

Additional Boilers at Derringer.—The addition of 500 H. P. Babcock & Wilcox boilers to their present boiler plant at Derringer breaker, giving it a capacity of 2,000 H. P.

New Dwelling Houses.—The erection of four four-family blocks of houses is in progress, increasing the accommodations to their employes to the extent of 16 families.

Additional Boilers at Gowan.—Reinforcement of Gowan No. 4 boiler plant by an addition of two Eric economic boilers, 100 H. P. each.

Mine Fire.—The fire which was discovered on October 22, 1902, in the second lift east end, Derringer, has been extinguished, but has been a source of expense right along, as it was considered necessary and a matter of precaution to load out the two breasts affected by the fire, as the only means to reduce the temperature, which continued excessively high after they had once stopped flushing.

Air Motor.—An air motor was put into service in the upper level to bring the coal from the east end, and it renders good service.

### LEHIGH COAL AND NAVIGATION COMPANY

The old No. 5 breaker at Lansford was abandoned May 12, 1902. The coal that was formerly prepared at this breaker is taken over to No. 6, where two new breakers have been constructed—one for the preparation of White Ash coal and the other for the preparation of Red Ash coal.

At No. 6 colliery, in addition to the breakers above noted, there were added two batteries of boilers, increasing the capacity of this plant by 600 horse-power, making a total of 3,000 horse-power.

A pair of 42 inch by 60 inch hoisting engines have been erected at Water shaft and 2,500 gallon tanks are used for hoisting water.

## G. B. MARKLE AND COMPANY Jeddo No. 4

All revolving screens replaced by shaking screens. Four 300 H. P. Babcock & Wilcox boilers have been installed. Eric City boilers removed. Compound Jeanesville pump, size 17 and 28x12x48, has been placed in the Wharton tunnel to deliver water to the surface. Pump house 32x16x14 feet constructed for this pump, together with a shaft, column way and column pipe line to the surface. Addition made to the boiler house to accommodate Babcock & Wilcox boilers. New steam pipe lines constructed and covered. A 6½ inch bore hole was sunk on the south side near the present pumping station to supply additional fresh water.

### Highland No. 5

All revolving screens replaced by shaker screens. Breaker engine converted into a double engine. The compressed air haulage system extended a distance of 4,700 feet. A compressed air loco-

motive of same size and style as those already in service added. Airway driven in the West Pink ash workings to the surface and a 16 foot Guibal fan installed. A tunnel has been driven from Buck Mountain vein to Buck Mountain vein through the overlap, West gangway A, Highland 5 slope A. Highland 5 slope A, West gangway A, connected to tunnel B for drainage. The following planes constructed: Plane F from East gangway A to East gangway C, slope A; plane G from West gangway A to Second lift pink ash; plane H from West gangway A to slope A, first level at west end.

### Highland No. 2

Cylinder boilers removed and replaced by 14 100 H. P. Erie City boilers. Boiler house changed to accommodate new plant. Steam pipe lines constructed and covered. A Cameron-Goyne pump, size 20x10x36 inches has been placed on Highland No. 2 main bottom and independent column connected to surface. Sturtevant fan and engine added to boiler plant.

### Highland No. 1

Old cylinder boiler plant has been abandoned and a new boiler plant consisting of 8 100 H. P. Erie City boilers installed. New boiler house erected. New steam pipe line constructed and covered. Sturtevant fan and engine placed in boiler house. Coal trestling

built for boiler house coal

### Ebervale

No. 4 slope opened up and mining begun.

### Highland No. 6

A slope in the Keiper basin, Buck Mountain vein, which is known as Highland No. 6, has been sunk 94 yards in length and an 8x8 foot airway driven.

## LEHIGH VALLEY COAL COMPANY Hazleton No. 1 Colliery

A flume 4 feet deep, 7 feet wide and 960 feet long was constructed across the No. 6 stripping for the purpose of taking care of the surface drainage, also to replace a flume which obstructed a large area of stripping, which will in time enable them to mine an equal area of coal.

A 20x30 foot three compartment office was creeded for the convenience of the foremen and clerks.

### Hazleton Shaft Colliery

The Hazle Creek channel, which had been filled with culm, etc., was reopened and the sides sheet-piled, giving an average channel of 8 feet in depth and 16 feet wide for a distance of two and one-half miles. This channel was opened for the purpose of taking care of the surface drainage along the entire length of the property.

A conveyor line and settling tanks were constructed for the parpose of taking care of the ashes made at the boiler plant. The settling tanks are connected to the boiler plant by a line of terra cotta pipe and the ashes are conveyed through this pipe by water to the conveyor line, then elevated to a bank.

Four return tubular boilers of Vulcan Iron Works make, of 600 horse power, were added to the boiler plant, and boiler house extended 49 feet to shelter the same.

A 12x48 inch Thatcher pump was installed in pump room on second level and connected with the surface by 335 feet of 16 inch column pipe.

A stable with a capacity of twenty mules was made in the Buck Mountain vein, North tunnel, second level, 50 feet above the level of the gangway and connected with the return airway.

A skip was taken off the north side of pump room at bottom of No. 40 slope for the purpose of making room for the installation of more pumps. Two 10x26x36 inch Goyne pumps, together with 665 feet of 10 inch column line, were installed and put in operation.

# Spring Brook Colliery

A tunnel 360 feet long was driven from the Mammoth to the Wharton vein on the No. 1 slope level.

### ESTATE A. S. VAN WICKLE

### Coleraine Colliery

Installed electric light plant complete and one 150 H. P. return tubular boiler.

Drove a tunnel 180 feet long, from the Buck Mountain to the Gamma vein. Made a pump house in rock at the bottom of the Buck Mountain slope and put in a 24x12x24 inch Cameron pump.

# **Evans Colliery**

Installed one 100 H. P. return tubular boiler and a four foot blast fan to supply air for the boilers.

A rock shaft was put down 123 feet from the surface to the Buck Mountain vein to make a second opening for, and to veutilate the Buck Mountain slope.

### PARDEE BROTHERS AND COMPANY

### Lattimer

This company commenced the erection of a new wooden breaker in July, 1903, and completed same so as to be ready for operation in January, 1904. This breaker will have a capacity of from twelve to fifteen hundred tons per day.

A new boiler plant was also erected, having at the present time six Heine safety boilers installed, aggregating 1,560 H. P. This plant will do the work of two old cylinder boiler plants, one of which was located at No. 2 and the other at No. 3. A new steam pipe line, which was erected during the year, will distribute the steam to all parts of the colliery.

A new steel plate ventilating fan is being constructed, which, when completed, will have a capacity of two hundred and fifty thousand feet of air per minute, with a water gauge of three inches.

### CALVIN PARDEE AND COMPANY

### Harwood

This firm increased the capacity of their central plant by adding two 150 H. P. each horizontal return tubular boilers, which makes the total capacity at their central plant 1,800 horse power.

### UPPER LEHIGH COAL COMPANY

No. 2 Breaker.—Installed three anthracite coal spiral separators, one new set large steel rolls and two shakers.

No. 1 Stripping.—Installed one "Little Giant" steam shovel, one pair hoisting engines and vertical boiler.

No. 3 Stripping.—One 10x12 inch locomotive.

No. 1 Slope.—Installed 8x12x16 Jeanesville pump; drove rock tunnel (50) feet in length from Buck Mountain to underlying seam.

No. 2. Slope.—Installed 12x36x28 inch Jeanesville duplex pump; put in 10 inch exhaust line from pumps to surface; drove short tunnel from Buck Mountain to underlying seam.

No. 3 Slope.—Drove short tunnel from Buck Mountain to underlying seam.

No. 5 Slope.—One new ventilating fan and engine erected.

No. 6 Slope.—March 26 No. 6 engine and boiler house burned down and have since been replaced by new ones.

No. 10 Slope.—This slope was sunk on the (A) seam south of No. 2 basin; a tipple, hoisting engine, locomotive, boiler and ventilating fan installed, gangways have been started and second opening completed; 2,000 feet of water main laid to furnish water for boilers.

### CHAS. M. DODSON AND COMPANY

### Beaver Brook

Set up during the year two tubular boilers, and now have five more on hand, by which they expect to be able to do away with all the old style cylinder boilers, twenty-eight in number.

Drove a tunnel 150 feet long from the Buck Mountain to the Gamma vein. This vein has not been worked heretofore in this colliery and they are now turning gangways with the intention of working it extensively.

A new Jeanesville compound duplex pump, 38x23x14x48 inches, was placed in No. 11 slope.

# J. S. WENTZ AND COMPANY

# Hazle Brook Colliery

Built a new breaker of 800 tons capacity and abandoned old breaker that has been in operation since the colliery has been started.

Installed four 150 horse power return tubular boilers, built by the Vulcan Iron Works of Wilkes-Barre, Pa., to take the place of fifteen 36 inch by 36 feet cylinder boilers.

Sank a slope in the overlying measures, 3,000 feet east of breaker and installed a 13x14 hoisting engine at this slope.

### M. S. KEMMERER AND COMPANY

### Sandy Run

This company has commenced the driving of a drainage tunnel to drain the water from their lower levels, which have been under water since the strike of 1902.

### BLACK CREEK COAL COMPANY

### Harleigh

Drove a tunnel 60 feet long from the Mammoth to the Wharton. A slope was sunk at the foot of the breaker plane into the Wharton 150 feet long to the level of tunnel, this slope, and will be continued 150 feet farther to the basin of the Wharton. When this slope is finished they will hoist all their coal from the Mammoth and Wharton direct into the breaker.

A breaker was erected with a capacity of 500 tons per day, equipped with modern machinery, and same has been running for the past three months.

They have installed a pair of 76 H. P. hoisting engines; one 69

H. P. breaker engine; erected two 125 H. P. each return tubular boilers and are at present erecting another of 125 H. P.

### Rowe Colliery

Placed one 50 H. P. tubular boiler and one pair of 34 H. P. hoisting engines.

### W. R. McTURK & COMPANY

The Star washery of W. R. McTurk and Company, located at Treschow, was destroyed by fire on May 1, 1903. The fire, as near as could be ascertained, originated in the boiler house, from some unknown cause.

# Fire at No. 6 Lansford

On August 26 it was suspected that a fire existed on the west side of No. 6 shaft, from the fact that for several days men working in the No. 6 water level tunnel found themselves becoming sick. It was thought, and rightly too, that the fire must be in one of the lower levels. It was decided to drive holes from side of water level gangway back to the top rock. Several holes were driven and water turned into them, but it was found that this came out cold from breast 3, 4 and 5, West Crack vein gangway, shaft level. Work was suspended in shaft and the air current reversed and they finally found the fire in the battery of No. 7 breast, lower West Mammoth, on September 24, having been unable up to that time to examine this breast on account of the large quantity of carbonic acid gas that was present. They worked at trying to load the coal in No. 7 breast, putting out strong fire in coal at the battery, and at times putting water in gob above No. 7 from water level, until October 8, by which time the fire had gone through into No. 8 and it was clearly shown that it was impossible to load out the burning coal in the gobs as fast as the fire spread. Pumping and hoisting of water was stopped. A dam was put across the Panther creek and a flume built to carry all the water of the Panther creek into the mine through the water level tunnel. A pump and column were also placed at north end of Lansford tunnel and water from Nesquehoning Valley pumped into Mammoth vein gangway, which was connected with the No. 6 workings. A dam East of Lansford tunnel, which is fifty-six feet lower vertically than No. 6 water level, was closed and a dam built in pillar between No. 6 and Nesquehoning, in a gangway thirty-five feet lower than No. 6 water level. The water raised to No. 6 water level on October 22, and on October 24 the valve was opened in Lansford tunnel and water lowered to that level to allow the resumption of work at No. 3, Nesquehoning, which was stopped while the water was above the level of old gangway through the pillar. On November 12 they started to hoist water with the coal engines and on November 22, started with large pair of water engines, just installed. The water was all removed by December 9, and they resumed hoisting coal in No. 6 shaft on December 14. Holes have been driven and the region where the fire existed thoroughly explored. High temperature, from 105 to 120 degrees, is found in the old Mammoth gob but no sulphur or sign of fire, and the holes cool off very rapidly when opened. Indications are that the fire has been extinguished.

### Mine Foremen's Examinations

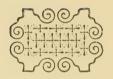
The annual examination of applicants for certificates of qualification as mine foremen and assistant mine foremen was held in the Green Street School Building, at Hazleton, on August 18 and 19, 1903. The Board of Examiners was composed of D. J. Roderick, Inspector; A. W. Drake, superintendent; George McGee, miner; James Harkins, miner. The following named persons, having passed a satisfactory examination, were recommended and received certificates:

### Mine Foremen

George Kirschner, Lattimer Mines; Frank Ward, Drifton; Levi Mumie, Lattimer Mines; James Bonner, Freeland; David H. Williams, Lattimer Mines; William Purdy, Hazleton; Harry Polgrean, Hazleton; Alonzo Dodson, Hazleton; William Frey, Oncida; William Job, Sandy Run; David M. Emanuel, Nesquehoning.

### Assistant Mine Foremen

John Yeager, Hazleton; John D. Davies, Audenried; Richard Morris, Coleraine; David H. Griffith, Lansford; John L. Richards, Summit Hill; David H. Davies, Lansford; Robert L. Sinyard, Summit Hill; Sylvester Weaver, Sandy Run; John J. Gallagher, Jeddo; William B. Cunning, Lansford; John Mitchell, Lansford; Lawrence Donelly, Nesquehoning; John E. Shinton, Lansford; John M. Gallagher, Freeland.



# Tenth Anthracite District

SCHUYLKILL COUNTY

Shenandoah, Pa., February 23, 1904.

Hon. James E. Roderick, Chief of Department of Mines:

Sir: I have the honor of submitting to you my annual report as Inspector of Mines for the Tenth Anthracite District for the year ending December 31, 1903.

Respectfully submitted,
WILLIAM STEIN,
Inspector.

### Tenth Anthracite District, 1903

### SUMMARY OF STATISTICS

Number of mines in district,	22
Number of mines in operation,	20
Number of tons of coal produced,	3,680,600
Number of tons shipped to market,	3,199,261
Number of tons sold at mines to local trade,	63,992
Number of tons consumed at mines in generating steam	
and heat,	417,347
Number of persons employed inside the mines,	5,052
Number of persons employed outside the mines,	3,818
Number of fatal accidents inside the mines,	13
Number of tons produced for each fatal accident inside,	283,123
Number of persons employed per fatal accident inside,	389
Number of fatal accidents outside,	7
Number of persons employed per fatal accident outside,	545
Number of wives made widows by fatal accidents,	7
Number of children orphaned by fatal accidents,	26
Number of non-fatal accidents inside the mines,	48
Number of persons employed per non-fatal accident in-	
side,	105
Number of non-fatal accidents outside,	12
Number of persons employed per non-fatal accident out-	
side,	318
Number of steam locomotives used inside,	2
Number of compressed air locomotives used inside,	3
Number of fans used for ventilation,	33
Number of gaseous mines in operation,	18
Number of non-gaseous mines in operation,	4
Number of old mines shandened	1

# TABLE A.—Tenth Anthracite District, 1903

### PRODUCTION OF COAL

Names of Companies	Tons
Philadelphia and Reading Coal and Iron Company,	2,093,042
Lehigh Valley Coal Company,	682,627
Susquehanna Coal Company,	199,393
Cambridge Coal Company,	85,115
Thomas Coal Company,	61,879
W. R. McTurk and Co.,	91,112
M. A. Gerber and S. A. Seaman,	$30,\!304$
Lawrence Coal Company,	5,691
North American Coal Company,	$175,\!573$
Stoddart Coal Company,	64,012
Brookwood Coal Company,	191,852
Total,	3,680,600
Declarion by Counties	

# Production by Counties

TABLE B.-Tenth Anthracite District, 1903

Fatal and non-fatal accidents; number of tons of coal produced per accident; number of persons employed; number employed per accident

		Names of Companies	Philadelphia and Reading Coal and Iron Co Lebigh Valley Croal Co Cambridge Coal Co Cambridge Coal Co W. R. McTurk and Co North American Coal Co North American Coal Co
	Fata	əpisuI	F-4-01   EI
	Fatal Accidents	9bistuO	16 CM
		IstoT	20 20 50
	Non-Fatal Accidents	əbisnI	25 1 1 2 1 1 2 1 1 2 1 1 2 1 1 2 1 1 2 1
	al Acci	- SpistuO	1 1 2 2 8
	dents	IstoT	200 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
	per	Tons of coal produced tales accident instal	299, 006 170, 657 99, 695 283, 123
	per je	Tons of coal produced in non-fatal accident inside	83.722 40.154 91.696 85.115 191.112 15.152
	app	Number of employes ins	3,100 1,157 1,157 402 83 64 54 5,652
	eblat	Number of employes ou	2, 406 189 2.7 2.6 125 35 85 85 85 85
	68	Total number of employ	5,566 1,716 609 141. 189 109 8,879
	əpisu	i seynfame to redurity free fatal accident	451 289 201 389
	əpisn	Number of employes i per non-fatal accident	126 68 85 85 87 105
9	pistu	Number of emoloyes o	294
Э	pisiu	Number of employes of per non-fatal accident	318

TABLE C.—Tenth Anthracite District, 1903 Classification of Fatal Accidents

		ist t busii)	4014 -001-60-01 S
		shistuo listoT	e i eeeN e t-
s s		sesum succentilios K	PE .FE .C4
Outside of Mines		Py boller explosions	
tside (		Dr. suffocation	
no		By machinery	
		By cars	
		Total inside	AGG - G16 - 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
		Miscellaneous causes	
		Suffecated by coal, etc.	
		səlnu xil	
		seirelist is bedeur	
	Into	Manways, breasts, etc.	
s a l	Mines  Sy Falling Into	sade(s	
Inside of Mines	By E	Shafts	
nside		By blasts, etc.	
1		Powder and dynamite	
		Smothered by Eas	
		sed jo uotsojdka X()	63   64
		lly mine cars	
	lo s	100Я	21
	Ey Falls	911168	
	) A	Coal	
			January, March, March, April, May June June Septembri Octobre: December, Totals,

TABLE D.-Tenth Anthracite District, 1303 Classification of Non-Fatal Accidents

		Grand total	C 0100-101-101-00-00
i		Shishuo IsloT'	H
so !		Miscellaneous causes	clene
Outside of Mines		132 police exlications	
ide of		Introcation (I	
out		By machinery	H
		STES VC	2
'		· objani IstoT	, <mark>ଓ ରମ୍ପର୍କାର୍ଡ୍ଟେଲ୍କ , ଧ</mark> ୁ
1		Miscellaneous causes	4
		Suffocated by coal, etc.	
		By mules	
i		Crushed at batteries	
	By Falling Into	Manways, breasts, etc.	
ys.		sedels	
Inside of Mines		FijeqS	
side of		Ey blasts, etc.	
In	. —	Powder and dynamite	
		Smothered by eas	
		eng to moisofque vil	H (000) = 01
		sates saita til	
	of	Roof	
	Falls of	Slate	
	By	IsoO	
			January, March, March, April, Max, Jus, Jus, Anust, September, Coctober, November, December,

Occupations of Persons Killed or Fatally Injured Inside and Outside the Mines TABLE E.-Tenth Anthracite District, 1903

		4 c/m : 50 c4 m c9 m 54 :
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	All ther timpleys	To the to
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Outside	हावान विकास (एक्टर)	
	Temental base seement	
	Blackst, libs and compenses	
	u au et e) a justine)	
	Superintendents	
	əpisu; [ut /],	**** *** ***   E
	All other employes	
	Company men	
	uəməlmi,I	
de	1,00t-Jud 8 und publiss	
Inside	L'pivers and runners	
	Miners' Inberers	
	Ninors	***
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		Jarunaw. Fol et al. Mary Mary Mary Mary Mary Mary Mary Mary
	٠	Jarnary March Marc

TABLE F.—Tenth Anthracite District, 1903
Occupations of Persons Injured Inside and Outside the Mines

09		Grand total	
12	H	Total outside	
œ	C1C3 F4 C1	All other employes	
		Воок-кеерега and clerks	
		Slate pickers (men)	
2		Slate pickers (boys)	Outside
-		Engineers and firemen	
-	-	Blacksmiths and carpenters	
		Outside foremen	
:		Superintendents	
48		Spizni Insol'	
90	H 0 HH H0	All other employes	
		Company men	
		<b>u</b> ətudum <sub>c</sub> ı	
		Door-boys and helpers	9
60		Drivers and runners	Inside
000	H 6067 H 61	Miners' laborers	
28	ro 92-0310000040	Miners	
-		Fire bosses and assistants	
		Assistant mine foremen	
		Mine foremen	
Totals,	Jamuary, March, March, March, May, June, July, July, Selttember, October, November,	•	

### TABLE G.—Tenth Anthracite District, 1903

Nationality of Persons Killed or Fatally Injured Inside and Outside the Mines

	American	Welsh	Čerman	Pelish	Hunyasiun	Lithuanien	Austrian	Assyrian	Totals
January, February, March,	1 1		·····i			1			4 2 1
April, May, June, July, August	1	1	· · · · j	1		1 1			1 3 2
August, September, October, November, December,	1			1			1	1	3 1 2
Totals,	5	1	2		1		1	1	20

# TABLE H.—Tenth Anthracite District, 1903

Nationality of Persons Injured Inside and Outside the Mines

						u		и				
	American	English	lrish	German	Polish	Hungaria	Itaban	Lithuamia	Eursian	Heer	Ty rollian	Totals
anuary,	1			1	9		1	2				
farch,			1					1	1			
lay,	4		1		3	(		1	1			
uly,	2				2			3				
ugust,eptember,	5		1		2			2				
ovember,	1 2			1			1	1			1	
ecember,	1		1		1	L		1				
Totals,	17	1	5	1	11	1	3	17	2	1	1	

TABLE L.-Tenth Anthracite District, 1903

operators and mines, kind of openings, type and size of fans, size of furnaces, volume of air produced by fan or furnace per minute, number of splits of air currents, number of persons employed inside, and quantity of air produced for each employe per

	REPORT OF THE D	EPARIMENT OF MINES	
-	VACERSE DIMPER OF COLD COR	20 4 4 4 4 4 5 5 5 5 5 5 5 5 5 5 5 5 5 5	1,023 S51
	hey light of persons employed	121 213 201 202 213 203 153 153 168 168	86 104 1
1	Tun ber of cubic feet per- punnte lassing out at out- left	57, 600 150, 532 120, 543 120, 543 01, 956 61, 935 13, 000 73, 000 73, 000 73, 000	91,000
•	Total arminer of a printing of the Polymer of the manufacture of the printing	68, 999 123, 523 123, 524 123, 541 12, 541 12, 541 12, 541 12, 541	8°,000 88,500
	Number of each state of the part of the pa	77.00 105.715 101.715 101.715 101.715 101.715 101.700 101.700 101.700 101.700 101.700 101.700 101.700 101.700 101.700 101.700	97,000
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-	nrunge Zamber et revelutions per	5993288595 899889883	08
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	Mid'h of blades in feet	DODO440444 1001-465044	7
	fool ni nal lo referantid	~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~	21
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	snoases-u-u ao snoases	Gaseous, Gas	Gaseous, Gaseous,
	guineqo 10 bniX	Shart 1	Slope
minute	Names of Operators and Mines	Philadelphia and Brading Coal and Iroladelphia and Bradin Ridge.  Tadian Ridge.  Period of the Co.  Fortier Strum.  Fortier Ridge.  Fortier Ridge.  Hammond.	Lehigh Valley Ccal Co Packer No. 2, Packer No. 3,

\*Permanently abendened

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Gu.Sod, Contral, Cunhal,	Gurle II. Gurle II. Gurle III.	Gurb.l. stram.	Challed .	Gu,bal	Guibal,.	D. B. D	
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Scoutt.	Shee't Sheelt	Paint.		<u>a</u>	ada .c.	7.	
Packer No. 4. Packer No. 5. Facker No. 5.	Susquehanna Coal Co. William Fenn, William Penn,	Cambridge Coal Co. Puff	Kehley's Run,	Grand, Gaso us, Fan,	M. A. Gerb.r and S. A. F. unan lunnace,	States,	***************************************

TABLE 1.—Tenth Anthracite District, 1903 Operators, Location of Collieries, Railroads, Etc.

Railroad to Mine	Philadelphia and Reading Philadelphia and Reading Philadelphia and Keading Philadelphia and Keading Philadelphia and Reading Philadelphia and Reading Philadelphia and Reading Philadelphia and Reading Philadelphia and Reading Philadelphia and Reading Philadelphia and Reading Philadelphia and Reading Philadelphia and Reading Philadelphia and Reading Philadelphia and Reading Philadelphia and Reading Philadelphia and Reading Philadelphia and Reading Philadelphia and Reading Philadelphia and Reading Philadelphia and Reading Philadelphia and Reading Philadelphia and Reading	Lehigh Valley Leh gh Valley Lehigh Valley Lehigh Valley	Pennsylvania.	Philadelphia and Reading	Philadelphia and Reading	Philadelphia and Reading	Philadelphia and Reading	Philadelphia and Reading
P. O. Address	Pottswille Pottswille Pottswille Pottswille Pottswille Pottswille Pottswille Pottswille Pottswille Pottswille	Centralia,	shaft,	Shenandoah,	Shenandoah,	Girardville,	Tamaqua,	Frackville,
Name of Super-intendent	John Veith, John Veith, John Veith, John Veith, John Veith, John Veith, John Veith, John Veith, John Veith, John Veith, John Veith, John Veith, John Veith,	J. M. Humphreys. J. M. Humphreys. J. M. Humphreys. J. M. Humphreys.	William Auman,	David R. James,	Thomas Band,	W. J. Heiser,	M. A. Gerber,	Wm. J. Miller,
P. O. Address	Pottsville, Pottsville, Pottsville, Pottsville, Pottsville, Pottsville, Pottsville, Pottsville, Pottsville, Pottsville, Pottsville, Pottsville, Pottsville,	Wilkes-Barre, Wilkes-Barre, Wilkes-Barre,	Wilkes-Barre,	Shenandoah,	Shenandcah,	320 Walnut street, Ph.Ludelphia,	Tamaqua,	Pottsville,
Name of General Superintendent	Wm. J. Richards, Wm. J. Richards, Wm. J. Richards, Wm. J. Richards, Wm. J. Richards, Wm. J. Richards, Wm. J. Richards, Wm. J. Richards, Wm. J. Richards, Wm. J. Richards, Wm. J. Richards, Wm. J. Richards, Wm. J. Richards, Wm. J. Richards, Wm. J. Richards, Wm. J. Richards, Wm. J. Richards, Wm. J. Richards, Wm. J. Richards, Wm. J. Richards,	S. D. Warriner, S. D. Warriner, S. D. Warriner, S. D. Warriner,	Robert A. Quin,	David R. James,	Thomas Baird,	W. R. McTurk,	M. A. Gerber,	W. S. Sheafer,
County	Sebuykill Schuykill Schuykill Schuykill Schuykill Schuykill Schuykill Schuykill Schuykill Schuykill Schuykill Schuykill Schuykill	Schuylkill, Schuylkill, Schuykill,	Schuylkill,	Schuylkill,	Schuylkfil,	Schuylkill,	Schuylkill,	Schuylkill,
Names of Operators and Col-	Philadelphia and Reading Coal Indian Rude, Sheiandoan City, West Sheiandoan, Turkey Run, Turkey Run, Turkey Run, Turkey Run, Turkey Run, Turkey Run, Turkey Run, Turkey Run, Turkey Run, Turkey Run, Turkey Run, Turkey Run, Turkey Run, Turkey Run, Turkey Rude, Gluerton Girlerton	Lehigh Valley Coal Co. Packer No. 3, Packer No. 3, Packer No. 4,	Susquehanna Coal Co.	Cambridge Coal Co.	Thomas Coal Co.	W. R. McTurk and Co.	M. A. Gerber and S. A. Seaman Furnace,	Lawrence Coal Co.

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ad Reading	Dood by	nu meaning	nd Reading	
Philadelphia and Reading	Deficients and Dealing	Philodelphia and reading	Philadelphia and Reading	
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chuvikill H W Samma Wilkes-Barre		Schuellitt Grand Monoge Minagevilla House	Hwatsward washery. School Henry Mayers, Minersville, Henry Mayers, Minersville, Min	
			: : : 	
Samme		Morror	Meyer	
МН			Henry Henry	
Schuvileill	Cohmontill	Schug thin,	Schoy Bill	
Co.			Predavend vashery.	
North American Coal	Stoddart Coal Co.	Brokwad Cal Co.		
North American Coal	irt Co	( P )	washer	
schuyi	Stade	Bre oky	Run	
No No	Stoddart Washern	Stante	Breed, Kaven	-

TABLE 2.-Tenth Anth racite District, 1903

Number of tons of coal mined in each colliery, number of days worked, number of persons employed, number killed and injured,

Number of herses and mules	42 @ 44 8 9 9 9 4 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
esu besu to bounds of dynamite	8. 29 11. 25 or 11. 25 or 11. 25 or 15. 25 or 25. 49 26. 49 27. 63 28. 49 27. 63 27. 63 28. 49 27. 63 28. 49 28. 49 28. 49 28. 49 28. 49 28. 49 28. 49 49 49 49 49 49 49 49 49 49 49 49 49 4
Number of kegs of powder used	6.00 M
Number of non-fatal accidents	4.50:1 0 - 10:1
Number of fatal accidents	01010010
Zamber of employes	88555555555555555555555555555555555555
Number of days worked	, 1882 - C - G - B - G - G - G - G - G - G - G - G
rotal production of coal in tons	28 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8
Number of tons sold to local	15.51 6.83 1.63 1.73 1.73 1.73 1.73 1.73 1.73 1.73 1.7
maste tot been anot to temming and heat at collicties	19 (19 (19 (19 (19 (19 (19 (19 (19 (19 (
Number of tons of coal shipped by rail or otherwise	195, 791 112, 812 113, 812 111, 812 111, 812 111, 812 111, 812 111, 813 111, 8
County	Schuylkill Schuylkill Schuylkill Schuylkill Schuylkill Schuylkill Schuylkill Schuylkill Schuylkill Schuylkill Schuylkill Schuylkill
Names of Operators and Collieries	Philadelphia and Reading Coal and Iron Co. Indian Ridge. West Shemand-wh. West Shomand-wh. No. 3. Hammond. Personn No. 3. Bast. Bast. Bast. Calberton. Draper. Girard Mammoth, Flank Ridge washery. Grand Mammoth washery.

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11.5. 11.0.1. 11.0.1.2. 11.0.1.2.2.2.2.3.3.3.3.3.3.3.3.3.3.3.3.3.3.3	187	181,181	7	ISC FE		198		166,410	<u>3</u>	: 4. 3		8,58	170,119	13, 199, 261
Schuylkill, Schuylkill, Schuylkill, Schuylkill,		S-huylkill;	Schuylkill,	Schaylkill	Schuyl'kill,	Schaylkill,	Sebaylkill,	S-huylkill	Schuylldill,	Schuylkill,	Sehuylkill,			
Pareken No. 1. Pelagth Valley Conf.	Totals,	William Polin, commencer	Carbindae,	K Pry's Run, Themas Coal Co.	Groupl,	M. A. G. et et and S. A. Saman	LAMPERSON, LAMPENCE COM Co.	N I F huylk II washery,	Stradart Washery	Start is collecty.	Prokwod wastory, Eaven Dun worshery,		Totals,	General 1 11 113,

# TABLE 2-Recapitulation

Number of horses and mules	20 136 136 140 140 140 150 160 160 160 160 160 160 160 160 160 16
Number of pounds of dynamite	217. 873 52. 329 15, 600 6, 650 6, 650 6, 100 6, 100 2, 300 3, 900
Number of kegs of powder used	31,705 8,N14 5,351 1,611 165 165 550 550 580 48,360
Number of non-fatal accidents	60 1 22 1 33
Number of fatal accidents	11 11 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2
Number of employes	25.850 1,746
bodrow ayab to redgmun (Not including washerles)	218 256 265 265 265 265 113 111 280
Total production of coal in tons	2, 093, 042 682, 627 11, 523, 115 85, 115 80, 314 80, 314 17, 573 191, 573
Kumber of tons sold to local trade and used by employes	40.343 1.009 1.243 1.311 14.010 181 191 191 5.614
Mumber of tons used for steam and heat at collieries	269 964 73, 485 38, 536 2, 536 2, 291 1, 291 3, 947 8, 949 8, 949 7, 126
Sumber of tons of coal shipped by Tail or otherwise	1,72,73. 1018,43. 1018,43. 1018,43. 1018,43. 1018,43. 1018,43. 108,43. 179,112. 179,112.
County	Schuyltell Schuyltell Schuyltell Schuyltell Schuyltell Schuyltell Schuyltell Schuyltell Schuyltell Schuyltell Schuyltell Schuyltell Schuyltell
Names of Operators and Collieries	Philadelphia and Reading Coal and Iron Co., Lehigh Valley Coal Co., Caustrehemma Coal Co., Cantiridge Coal Co., W. R. McTurk and Co., M. A. Gerber and S. A. Seaman, Lawrence Coal Co., Stordart Coal Co., Stordart Coal Co., Browth American Coal Co., Stordart Coal Co., Totals,

# TABLE 2-Continued

1			
	Number of alr compressors	13 41   51   61	
	Zumber of electric dynamos		
ber 1	Quantity delivered to surface	1. 200 1. 700 1.	1987
911	(spacity in callens per minu		810
Suli	Number to surface	60000 1- 700 0 0 0 0 0 0 0 0 0	
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ers	Horse power	1115	0000
of Boile	Tubuler	2552255 Eusaxe E g   g   L   A	:
Number of Boilers	Horse power	2 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	673
7.	Isolabu (2')	\$   3   2   ×   2   2	21
	County	Schuylkill Schuylkill Schuylkill Schuylkill Schuylkill Schuylkill Schuylkill Schuylkill Schuylkill	Schuylkill,
	Names of Operators and Colleries	Philade bhin and Reading Coal and Iron Co. Shintan Rep. (197).  West Sh and the control of the c	Packer No. 3,

TABLE 2-Continued

			1	11							
	Number of air compressors										
	Number of electric dynamos	pri i									
per	Quantity delivered to surface	2,000	5,415	089		240		250		ii :	
931	Capacity in gallons yer minu	2,030	7,457	1,500		540		250			
Buir	Number of pumps deliver	60.53	6	-		67		٦			
	Total horse power	8,910 4,875	22,539	1,585	129	270	0+9	126	100	475	200
	Number of seams anginem Sesselo	36	123	19	₹	10	7	00	67	11	60
Locomotives	Elcetric										
omos	uik										
Loo	Steam	10.00	00								
	Lotal horse hower	2,500 1,260	5,656	1.250	1 1	1,850	089	500	300	1,000	460
s.i.s	Herse power	2,500	4,600	1,250	32.0	600	089.	320	300	1,000	400
of Boile	TaludaT	20 16 .	크	3	7	4	9	41	63	7	60
Number of Boilers	Herse power		1,056		20	1,200		15			
Z,	Cylindrical		555		61	61		-			
	County	Schuylkill,		Schuylkill,	Schuylkill	Schuylkill,	Schuylkill,	Schuylkill,	Schuylkill,	Schuylkill,	Schuylkill,
	Names of Operators and Collierles	Packer No. 4, Packer No. 5,	Totals,	Susquehanna Coal Co.	Cambridge Coal Co.	Thomas Coal Co.	W. R. McTurk and Co. ,	M. A. Gerber and S. A. Seaman Furnace,	Lawrence, Coal Co.	No. 1 Schuylkill washery,	Stoddart washery,

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TABLE 2 Recapitulation

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TABLE 3.—Tenth Anthracite District, 1903 Number of Each Class of Employes at Each Colliery

9	Grand total, inside and outside	626 612 612 223 53 54 53 83 83 83 83 83 83 83 83 83 83 83 83 83	87 87 87 87 87 87
side	Spistuo IstoT	200 2 2 2 2 2 2 2 2 3 3 3 3 3 3 3 3 3 3	12. 8. 3. 3. 4.16 8. 4.16
d Out	All other employes	55 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5	27 16 53 1. 294
ploye	Book-keepers and clerks	© 4 00 01 64 04 00 01 10 10 10 10 10 10 10 10 10 10 10	1 :   1
is Em	Slate pickers (men)	188 355 57 75 75 75 75 75 75 75 75 75 75 75 7	11 15 291
Persons Employed Outside	Slate pickers (boys)	93 169 53 53 54 43 43	9 9
of.	nemerh bas ereenigad	20 82 82 82 82 82 82 82 82 82 82 82 82 82	234
Occupations	Blacksmiths and carpenters	B 1000 1000 1000 1000 1000 1000 1000 10	1  0   18
cupa	nemerol ebistuO		-   2
Occ	stnebnetninequ:	[3]	:: : =
	9bizni IsjoT	######################################	3,130
side	All other employes	2024223 882221   :	292
red In	Сотрапу теп	22.02.02.02.02.02.02.02.02.02.02.02.02.0	1 : 1 : 5
Employed Inside	ь Бишһше <b>л</b>		
	Door boys and helpers	27 11 11 12 12 12 12 12 12 12 12 12 12 12	
Persons	erennur bas erevir()	68888844 F2488	:   :   300
ons of	Miners' laborers	25 25 25 25 25 25 25 25 25 25 25 25 25 2	: :   :   88
Occupations	Miners	\$25.2242   1	7.0
000	Fire bosses and assistants	11: 0x:0x:0x + 1:	1 - : 1 : 4
	Assistant mine foremen		: :   :   9
	nomenot eniM	<u> </u>	1 : :   : 1 : 1 : 3
	County	Schuylkill Schuylkill	Schuylkill. Schuylkill.
٠	Names of Operators and Collieries	Philadelphia and Reading Coal Indian Rulge, Shruamdush ('riv, West Sherandush, Turkey Run, Rohimor, Hammond, Bast, Bast, Bast, Bast, Bast, Bast, Gilberton, Draher, Gilberton,	Plank Ridge washery,

226 356 603 561	1,746	609	=	138	149	1.9	E1	12	25	146 25 26	214	672.8
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Lehigh Valley Coal Co. Packer No. 2. Packer No. 3. Packer No. 4.	Totals,	Susquehanna Coal Co. William Penn,	Cambridge Coal Co.	Thomas Coal Co. Kehley's Run,	W. R. McTurk and Co. Girard,	M. A. Gerber and S. A. Seaman Furnace,	Lawrence Coal Co.	North American Coal Co. No. 1 Schuylkill washery,	Stoddart Coal Co.	Brookword Coal Co. Stanton collicy. Prockwood washery. Raven Run washery.	Totals,	Grand totals,

# TABLE 3-Recapitulation

	Grand total, inside and outside	1,746 1,746
tside	Total outside	2.2 2.406 2.07 2.07 2.07 2.5 3.85 3.85 3.85 3.818
d Out	All other employes	1, 224 379 88 88 83 63 63 2, 008
ploye	Book-keepers and clerks	20 00 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
Occupations of Persons Employed Outside	Slate pickers (men)	291 155 155 2 6 6 6 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3
Persor	Slate pickers (boys)	550 550 550 100 140 140 140 140 140 140 140 140 14
Jo St	Engineers and firemen	234 300 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8
ation	Blacksmiths and carpenters	200 200 200 200 200 200 200 200 200 200
cup	Outside foremen	52444444444460   72
ŏ	Superintendents	4 HELLE HO 21
	əbiani İstoT	3,160 1,157 402 855 854 444 644 122 123 74 74
side	seyolqme refito IIA	762 383 125 125 16 9 9 1,300
Occupations of Persons Employed Inside	Сотралу теп	68.4 4 64 64 64 64 64 64 64 64 64 64 64 64
mploy	Билуртел	88
ens E	1)oor boys and helpers	688 16 12 12 13 13 14 14 15 16 16 16 16 16 16 16 16 16 16 16 16 16
Pers	areann bas erevird	2000 2000 2000 2000 2000 2000 2000 200
o suc	srendal 'sremiM	981 234 81 81 37 10 10 10 10 25 1, 385
upatio	Miners	1, 240 1, 240 1, 240 1, 240
000	Fire bosses and assistants	8 ic 4   L L L L   07
	Assistant mine foremen	80 HOM H : 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
	nomerol enila	E4====== : : : : : : : : : : : : : : : :
	County	Schuylkill. Schuylkill. Schuylkill. Schuylkill. Schuylkill. Schuylkill. Schuylkill. Schuylkill. Schuylkill.
	Names of Operators and Collieries	Philadelphia and Reading Coal and Iron Co. Lehigh Valley Coal Co. Susquehanna Coal Co. Thomas Coal Co. Thomas Coal Co. Thy A. A. Gerber and Co. M. A. Gerber and Co. North American Coal Co. Stoddart Coal Co. Brookwood Coal Co. Totals.

TABLE 3-Continued

						-								
					Number of Days Worked Each Month in Breaker	of Day	vs Worl	ted Eac	h Mont	h in Br	reaker			
Names of Operators and Collieries	County	January	February	Магећ	lindA	Мау	June	July	18nZnV	Selfember.	totober	Yovemper	Lingth Table T	Totals
Philadelphia and Reading Coal and Iron Co. Indian Rulge. Seramdond City. Wiset. Shanandash	Schuylkill,	8. 98 8. 98	61 54 61 55 62 65 80 80	85.5 85.6	17.1	33.51 4.	61.71 10.75 10.75	25.2	15 to	25 8.05 8.05	26.1	17.6	18.19	24.9
	Schuylkill,	-21.5	93.3	22	17.4	77	65.53	5.55	24.9	看	50	17.9	13	27.4
Hammond, State, Bast, Bast, Bast, Bast, Bast, Bast, Bast, Gilberton, Drayer, Orayer, Girard Mammoth,	Schuykill Schuykill Schuykill Schuykill Schuykill Schuykill	Saaa :	22.2 11.8 19.8 15.8	5432 5432	6. 5. 5. 5. 5. 5. 5. 5. 5. 5. 5. 5. 5. 5.	9 5 5	15 at 15 at	87828 8 78	1312 15 1312 15 1312 15	887-44 6 F F	C154	9. 11.12. 11.12.	5 1 1 5 1 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5	Tanana Tanana Tanana
Averages,		5.1	50.6	63	16	6.13	93	24.4	4.	1.5.1	20.0	16.4	16.5	218
Packer No. 2. Packer No. 3. Packer No. 3. Packer No. 3. Packer No. 4. Packer No. 5.	Schuylkill,} Schuylkill, Schuylkill,	64 		24.4	2.2	20.2	7.00	23.7	22.6	20.1	17.4	16	18.4	256
William Penn,	Schuylkill,	15.4	15.2	16.4	18.1	17.1	20.2	19.9	18.7	16.3	14	16.8	17.1	205
Cambridge,	Schuylkill,	25.4	23	63.63	16.9	23.9	23.7	24.8	21.4	52.9	C3	16.5	19	262
Kehley's Run,	Srhuylkill,			~	. 60	21.3	24.7	61	ţ.;	25	18.6	21	22.6	198
W. R. McTurk and Co.	Schuylkill,	18	17.4	3.5	E1	23.5	19.7	17.9	19.2	21.8	14.1	16.5	18.7	216
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TABLE 3- Continued

	alstoT	173	#	280	213
	December	16.8	12.7	22	18.2
	November	17.8	9.5	19	16.6
reaker	October	17.1	9.3	5.25	17.7
h in B	zeptember	16.7	6.7	25	19.7
h Mont	tsuguk	18.7	2	25	19.9
ked Eac	Lint	16	6	23	20.4
Number of Days Worked Each Month in Breaker	əunf	20	S	26	21.1
of Day	May	21	14.2	ક્રી	21
Number	linqA	22.1	13	25	17.9
	Матећ	6.7	13	24	15.7
	February		10	22	18.5
	Januaty			21	21.2
	County	Schuylkill,	Schuylkill,	Schuylkill,	
	Names of Operators and Collieries	M. A. Gerber and S. A. Seaman Furnace,	Lawrence, Lawrence Coal Co.	Brookwood Coal Co.	Averages.

TABLE 3-Recapitulation.

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20.8 17.4 14. 11.3 18.6 18.6 17.1 17.1 17.1 17.1 17.1 17.1 17.1	17.7
22.1 16.3 16.3 12.9 22.9 21.8 16.7 7.2	19.7
22 22 18 19 19 19 19 19 19 19 19 19 19 19 19 19	19.9
45.25.25.25.25.25.25.25.25.25.25.25.25.25	F.09
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20.7.1. 20.7.1.2.2.3.3.2.3.3.3.3.3.3.3.3.3.3.3.3.3.3	21
95511515 4.1.6.5.1.5.15	17.9
22.23.24.25.24.24.24.25.25.24.25.25.24.25.25.24.25.25.24.25.25.24.25.25.25.25.25.25.25.25.25.25.25.25.25.	15.7
20.6 21.5 15.2 15.2 23 23 17.4	18.5
22.3 24.7 25.3 4.5 4.5 4.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1	21.2
Schuylkill, Schuylkill, Schuylkill, Schuylkill, Schuylkill, Schuylkill, Schuylkill, Schuylkill,	
Philadelphia and Reading Coal and Iron Co., Lebigh Valley Coal Co., Susquehanna Coal Co., Cambridge Coal Co., Cambridge Coal Co., Cambridge Toal Co., W. R. McTurk and Co., M. A. Gerbor and S. A. Seaman, M. A. Gerbor and S. A. Seaman, Brookwood (Oal Co., Brookwood (Oal Co.)	Averages,

TABLE 4.—Tenth Anthracite District, 1903 Fatal Accidents in and about the Mines

Nature and Cause of Accident in Brief	Killed by an explosion of gas. Fatally burned by an explosion of gas. Died on the 17th, an explosion of gas. Killed by falling down inside shaft. He was lowering down timber by night, and accidentally wearest income.	3.民居臣	where he lost his the, and in some way was caught by a revolving shaft. Killed by falling down slope. Falled by a fall of coal. Fally fullied by a fall of slate. Disci	on the 5th.  Broken leg and otherwise fatally injured by a fall of clay at stripping. Died on	the 20th.  Killed by a fall of coal: carelessness on the part of the miner.  Killed, He rushed on to case after the	signal was given to hoist, and was engith between eage and shaft imber. Fatally injured by being run axes, two	loaded trip of cars. Died on the 25th. Killed, Caught in breaker elevator. Care-1	Farances on the part of Methm. Farances on the part of Methm.
County	Schuylkill, Schuylkill, Schuylkill,	Schuylkill, Schuylkill, Schuylkill,	Schuylkill, Schuylkill, Schuylkill,	Schuylkill.	Schuylkill,	Schuylkill,	Schuylkill.	Schuylkill.
Name of Colliery	Packer No. 4, Packer No. 4, Indian Ridge,	William Penn, Packer No. 3, Grandville washery,	Bast, Turkey lun. West Shenandoah,	Packer No. 5,	Shenandoah City, Shenandoah City,	West Shenandoah,	Indian Ridge,	Packer No. 2,
Number of orphans	1 0	ਚ ਜ : :	[	-41	: :	:	:	:
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nothaques()	Laborer, Miner, Driver,	Miner, Laborer, Jig runner,	Slope man, Laborer,	Laborer,	Laborer, Stable man,	Oiler,	Laborer,	Miner,
Vationality	Polish,	Polish, Lithuanian, American,	German, Lithwanian,	Polish,	Lithuanian,	American,	Polish,	roush,
Name of Person	John Silinski, Peter Youst, Michael Flaherty,	John Fogel, Shnen Galonis, Thomas Love,	Frank Meyers, Anthony Mushlofski, John Crauage,	William Actsus,	Stiney Stoko	Martin Dolan,	Andy Shumansky,	Allendel Milch,
211212		8118		ç 0 T	G1 61 50	C.1	~ <u>~</u>	7
tashivas to str(I	Jan.	Feb.	March May June		July		Aug.	nd see

TABLE 4-Continued

			•
Nature and Cause of Accident in Brief	Fatally injured; squeezed between cars. Died on the 20th. Smothered, Was, engaged filling up a breech-hofe, when the loose material entsided taking in flown	Fatally injured. Died on the 23d. While riding into his work he leaned over top rail of car and was caught between clute and car. Killed: fell down shaft. While in the act of caging a car, he neglected to sprag	the rear car, which followed him, pushing him down the shaft.  Farally injured. Died on the 24th. A car of culm was being hoisted up plane, when the hook broke, car descended to foot of plane, striking Roberto. He was not engaged at the place where he lost his life, but inadvertently went there.
County	Schuylkill, Schuylkill,	Schuylkill,	Schuylkill,
Name of Colliery	Packer No. 4,Bast,	Bast,	West Shenandoah,
Number of orphans	: :	: :	
swobiw to redund	<del>-</del>		
Married or single		vi vi	vi
93A	20	45	
Occupation	Laborer,	Rock miner, Spragger,	Timber loader.
Vationality	Assyrian,	Austrian,	Hungarian, .
Name of Person	Fred. Hart, Luke Garpey.	Frank Clouser, Frank Fisher,	Vastil Roberto,
Date of accident	18	Oct. 17	16

TABLE 5.—Tenth Anthracite District, 1903 Non-Fatal Accidents in and about the Mines

Brief	slope.	oal. nst it.	ion of	down	vheel,	nt be-	gway. in ex-	ın ex-
Nature and Cause of Accident in Brief	ming up w.	Face, 1948 broken by a fall of coal.  Farmen interest interest parterem.  Compound fracture of log; fall of coal.  Face and body injured by a blast.  Carg broken; piece of coal robled against it.  Log broken by fall of coal.  Log broken by fall of coal.	n explos	car rar	of car	Cog broken; kicked by a mule, Fracture of pelvis and ribs; caught be- tween car and prop.	to gan	ned by
Accid	uek con coal. ular sar d by an	fall of breast leg; f d by a soul roll coul.	d by an	mine rock	oal.	r a mu	a chute Uy bura	dy burn
nnse of	off tr fall of burne	n by a tell off ture of injure of call of call of call of call of s burnes	burne burne	ut off;	nin. Nofe	eg broken; kicked by racture of pelvis an tween car and prop,	all from s slight	s slight
and C	ten; fel ten by tut off nd face	s broke jured; nd frac a body sen; pic sen by	d hand	ngers ond.	nnk or ken: ta ken: s ken: s	car an	are and hands alosion of gas.	ace and hands plosion of gas.
Nature	Leg braken; fell off truck coming up slope Leg broken by fall of ceal. Finger cut off by circular saw.	Early, legs broken by a fall of coal. Spine, injured: left of breast parform. Compound fracture of leg; fall of coal. Face, and ledy injured by a blast. Leg breaker; piece of coal rolled against legs broken by fall of coal. Leg breaken by fall of coal.	Ras. Base and hands burned by an explosion of Base and hands burned by an expolsion of	gas. Three ingers cut off; mine car ran over this hand. Leg. broken; piece of rock rolled down	cum bank on mm. Log broken: Iail of coal, Ann broken: sprag flew out of car wheel, striking him.	Log broken; kicked by a mule. Fracture of pelvis and ribs; tween car and prop.	Arm broken; tell from chute to gangway. Face and hands slightly burned by an ex- abosion of gas.	Page and hands slightly burned by an explosion of gas.
tty.	Schuylkill, 1 Schuylkill, 1 Schuylkill, 1 Schuylkill, 1		Schuylkill, 1				Schuylkilli, Schuylkilli,	Schuylkill,
County								
iery						00		
of Coll	%	nn, randoa renn, th City o, 2, h City	ah City ah City		:00			
Name of Colliery	Packer No. 2, Draper, Packer No. 4, Packer No. 4,	Turkey Run, West Shermandoah, William Penn, Shenmadoah City, Parker No. 2, Parker No. 5, Shenmadoah City,	Shenandoah City, Shenandoah City,	Draper,	Packer No. Hammond,	Gilberton, Packer No.	Gilberton, Gilberton,	Gilberton,
Married or single	M. Dr N. Pa	SESSESS	M. Sh	S. Di	S. He	S	M. Gi	M. Gi
95.k	55 65 65 55	98338455	23	5 %	31 31	29	27 m	36
	Miner, Moner, Carpenter, Miner,	Miner, Luborer, Miner, Miner, Miner, Miner, Miner, Miner,	: :	: :			Fire boss,	Miner,
Occupation	Miner, Moner, Carpenter,	Miner, Laborer, Miner, Miner, Miner, Miner,	Laborer, Laborer,	Planeman, Laborer,	Laborer,	Laborer, Laborer,	e boss	ier,
	m,	an,	i					:
Nationality	American, Lithuanian, Italian,	Greek, Polish, Lithuanian, Lithuanian, Lithuanian, Kissian, Lithuanian,	Lithuanian, Lithuanian,	American, Italian, .	Russian,	American. Lithuanian.	American,	American,
on	Simon Wagner, Joseph Zuby, Sunday Nebo Lemuir Boscavage,	John Krillacofstie, Frank Metscawage, William Fogel, John Marduskie, John Fethey, Andy Offshaney,			4	Pat. McGee, Domenick Bazavage,	E	Thomas Evans,
f Person	Simon Wagner, Joseph Zuby, Sunday Nebo, Lemuir Boscavage,	cofstic	us,	Mart McTee, Nicholas Pelgrin,		Lazav	Henry Gottshall, Low Howels,	ans,
Name of	Simon Wagne Joseph Zuby, Sunday Nebo Lemuir Bose	John Krillacof Frank Metsea. William Foge John Mardusk John Fehey, Andry Offshane Isaac Piter,	Bob Mulychit Mike Stepsis,	Mart McTee, Nicholas Pel	Peter Madalis Thomas McGu	Pat, McGee, Domenick R	y Got Howe	as Ex
Ž.	Simol Josep Sunos Lemu	John Frand Willis John John Andy Isaac	Bob Mike	Mart	Peter Them	Pat. Dome	Henr	Thon
	1-1-0.4	5886425	10 .	21	1-13	27.	88	53
I) ate of accident	Jan.	March			May			

TABLE 5-Continued

Nature and Cause of Accident in Brief	Collar bone broken; gangway door fell on		Ho	explosion of gas. Body severely squeezed between leg and	car. Arm broken; caught between car and	stone wall. Foot badly smashed trying to get on dirt	dumper. Body injured by a rush of coal in dump	chute. Hands and face burned slightly by an ex-	plosion of gas. Hands and face burned slightly by an ex-	plosion of gas, Body bruised; caught between moving	cars.  Hand blown off by explosion of dynamite.  Arm broken; starting breaker chute, ma-	terial rushed on him. Collar bone broken; fell off car. Arm taken off; caught in breaker belt;	HULE	blast. Leg severely bruised by fall of coal.
County	Schuylkill,	Schuylkill, Schuylkill,	Schuylkill, Schuylkill,	Schuylkill,	Schuylkill,	Sehuylkill,	Schuylkill,	Schuylkill,	Schuylkill,	Schuylkill,	Schuylkill, Schuylkill,	Schuylkill, Schuylkill,	Schuylkill, Schuylkill, Schuylkill, Schuylkill,	Schuylkill,
Name of Colliery	Hammond,	Packer No. 5, Packer No. 4,	Packer No. 5. Packer No. 5.	Indian Ridge,	Packer No. 4,	West Shenandoah,	West Shenandoah,	Shenandoah City,	Shenandoah City,	Hammond,	Packer No. 5. Hammond,	Indian Ridge,Indian Ridge,	Packer No. 5, Packer No. 2, Furnace, Hammond,	Furnace,
Married or single	M.	z;zi	M.M.	M.	υż	:	υż	M.	υż	vi	. M.	¥ :	v, x, ≍, x,	M.
9.3 Y	30	35	88	38	13	14	33	38	27	61	39	51	33.55	36
noistion noistion	Repairman,	Laborer, Dist. supt.,	Miner,	Miner,	Laborer,	Message boy,	Platform man,	Miner,	Miner,	Driver,	Starter,	Miner,	Miner, Laborer, Miner, Starter,	Miner,
Nationality	American,	Polish,	Polish,	Lithuanian,	Polish,	American,	Polish,	Lithuanian,	Lithuanian,	American,	Irish,	American,	Lithuanian, Polish, Lithuanian, American,	Lithuanian,
Name of Person	James Taylor,	Adam Woolskee, Edward Williams,	Adam Vitlip,Anthony Carpowskie,	Jacob Mitchell,	Joseph Rakus,	Joseph Hinks,	William Maronskie,	Martin Zelinskie,	Anthony Dobgillas,	Anthony Maloney	James Ganghan,	Patrick Gibbons,	Andy Andies, Dave Hackemis, John Rice, Wilham McKeon,	John Myusky,
	63	13	22.53	9	9	15	15	16	16	18	60 60	112	9 9 12 12	12
Date of accident	June			July							Aug.		Sept.	

Polish, Engineer, 18   S.   Sehuylkill No. 1 wash-  Schuylkill, Bruised about legs and feet; caught in	7	house		from a blast. Head and arms cut and leg bruised by fall	Schuylkill, Pelvis and will between	H.	-	<u> </u>	W 7	Schuylkill, Arm and leg broken; caucht between car	·J.	Several right on min.  Several right by Sen; mule ran away and	[I]	
Schuylkil	Schuylkill,	Schuylkill,	Schuylkill, Schuylkill,	Schuylkill,	Schuylkil	Schuylkill, Schuylkill,	Schuylkill,	Schuylkill,	Schuylkill, Schuylkill,	Schuylkil	Schuylkill,	Schuylkill,	Schuylkill,	
Schuylkill No. 1 wash-	Hammond,	Hammond,	Gilberton,	33 M. Packer No. 5,	Packer No. 5,	Packer No. 5,Indian Ridge,	50 M. William Penn,	Girard,	Cambridge,	Turkey Run,	38 M. Gilberton,	Bear Ridge,	William Penn,	
vi.	Ľ.	'n	W.S.	M.	υż	N. N.	M.	र्थ हो	M.M.	υż	M.	M.	M.	_
18	53	51	E-8	6.5	119	88		â	77.83	18	Se	무	46	
Engineer,	Miner,	Laborer,	Driver,	Miner,	Loader,	Miner, 28 M. Packer No. 5, Miner, 25 S. Indian Ridge,	Miner,	Driver,	Miner, 24 M. Cambridge, Loader, 25 M. Hammond,	Spragger, 18 S.	Miner,	Ash-man, 41 M. Bear Ridge,	Miner,	
Polish,	Irish,	American, Laborer, 21 S.	American, Driver, 17 S. Lithuanian, Miner, 32 M.	Lithuanian,	American,	German,	Lithuanian,	I, Italian, Driver,	American,	American,	Pelish,	Hungarian,	Lithuanian,	
16 Nexander Ruff,	John Burke, Irish, Miner, 33 S.	Thomas Moran,	5 Pat. Holden,	16 Charles Hosseliskie,	10 William Delehanty, American, Loader, 19 S.	10 John Link,	William Czewinskie, Lithuanian,	Michael Gabriel	James Dowers,	Samuel Kale,	William Allabodd, Pelish,	Washington Keysock,	3) Alexander Lirkowski, Lithuanian, Miner, 46 M. William Penn,	
16	97	ล้	15 %	16		2 84	07	01		01	63	ñ	ĉ:	
			Oct.		Nov				Dec.					

### Fatal Accidents by Falls of Coal, Slate and Roof

January 29. John Fogel, killed at William Penn Colliery by a fall of top rock at face of breast. Carelessness of victim not timbering.

February 17. Simon Galonis, killed at Packer No. 3 Colliery by a fall of top slate. Unforeseen accident.

May 13. Anthony Mushlofski, killed at Turkey Run Colliery by a fall of coal. Unforeseen accident.

June 2. John Crauage, fatally injured at West Shenandoah Colliery by a fall of slate. Died on the 5th. Carelessness of victim.

June 24. Stiney Stoko, killed at Shenandoah City Colliery by a fall of coal. Carelessness of the miner not timbering his place of working.

# By Explosion of Gas

January 14. John Silinski, killed by an explosion of gas at Packer No. 4 Colliery. Used a naked lamp to explode an old breast.

January 14. Peter Youst, fatally burned by an explosion of gas at Packer No. 4 Colliery; died on the 17th. Was working with Silinski.

# By Mine Cars

October 17. Frank Clouser, fatally injured at Bast Colliery; died on the 23rd. Was riding in a car and leaned over the side, and was squeezed by timber.

# By Falling Down Shafts

January 14. Michael Flaherty, killed by falling down Indian Ridge No. 2 Shaft. Was lowering timber after quitting time, and in some way stepped into the shaft.

November 11. Frank Fisher, killed by falling down William Penn No. 2 Shaft. Was eaging a car and forgot to sprag the car behind him, which ran down pushing him down the shaft.

# By Falling Down Slope

March 4. Frank Meyers, killed by falling down the Bast Slope. He stepped off car to repair a pulley, and overbalanced himself.

# By Blasts

September 18. Michael Krick, fatally injured at Packer No. 2 Colliery. Died on the 19th. Struck by coal flying from a blast. Did not retreat to a place of safety.

## Miscellaneous

July 3. William Koch, killed by being squeezed between cage and shaft timber. He attempted to get on cage after signal was given engineer to hoist.

## Outside-By Mine Cars

July 24. Martin Dolan, fatally injured at West Shenandoah Colliery. Died on the 25th. Run over by mine cars. Carelessness on the part of victim.

September 18. Fred Hart, fatally injured at Packer No. 4 Colliery. Died on the 20th. Squeezed between two cars.

November 16. Vastil Roberto, fatally injured at West Shenandoah Colliery. Died on the 24th. Struck by car breaking loose on plane.

## By Breaker Machinery

August 4. Andy Shumansky, killed at Indian Ridge Colliery by being caught in elevator. Climbed over the fence.

February 20. Thomas Love, killed at Girard Colliery. Was caught by a revolving shaft; was 105 feet away from his place of work.

## Miscellaneous

June 13. William Actsus, fatally injured at Packer No. 5 strippings. Died on the 20th. Struck by clay rolling down stripping bank.

September 24. Luke Garpey, smothered in mine breech of Bast Colliery. He was filling up this crop fall. He got on the loose material when suddenly a subsidence took place taking him down. Body recovered 20 hours afterward.

## Condition of Collieries

There are 23 collieries and 6 washeries in the district. Preston No. 3 colliery, however, is now permanently abandoned, and all the surface improvements have been removed to other collieries.

During the year no coal has been mined from the Kehley's Run and Girard Mammoth collieries. Any coal that has been shipped from these two collieries has been produced from the culm banks. Lawrence colliery has produced very little coal during the year, only operating two water level drifts in the Buck Mountain seam and employing from 18 to 20 persons. The colliery is flooded from the fourth level up to water level.

Table No. 2 shows that all the coal produced from West Shenandoah, Kohinoor and Turkey Run collieries, operated by the Philadel-

phia and Reading Coal and Iron Company is prepared at the West Shenandoah Mammoth breaker, and all the coal produced from Packers 2, 3, 4 and 5 collieries, operated by the Lehigh Valley Coal Company is prepared at Packer No. 4 Mammoth breaker.

It is gratifying to note that during the year there has been a very noticeable increase in the volume of air in circulation in the different collieries of the district, especially those of the Philadelphia and Reading Coal and Iron Company and the Lehigh Valley Coal Company.

In addition to good ventilation these companies maintain good dry road beds, good drainage and keep their collieries practically safe.

I cannot say that any colliery is exceptionally bad with regard to ventilation, drainage and general safety, but there is room for improvement at three of them, and every effort is being made to bring these improvements about, as suggested by me.

At Kohinoor and Gilberton and Draper collieries the water is hoisted, no pumps in use. Water from Draper colliery drains through a tunnel across the basin to Gilberton. At William Penn colliery the water is hoisted in No. 2 shaft.

## Improvements During the Year

## PHILADELPHIA AND READING COAL AND IRON COMPANY

Indian Ridge Colliery.—A new pump room has been constructed north and level with bottom of shaft in which will be placed an 18x48 inch pump; an additional ventilating fan has been erected.

Shenandoah City Colliery.—A tunnel is in course of construction from bottom to top member of Mammoth seam, first level east of Buck Mountain underground slope, dimensions 12x8 feet and is now driven 163 feet.

West Shenandoah Colliery.—A new pump room has been constructed at bottom of slope in which will be placed an 18x48 inch pump. A new tender slope is in course of construction through which all the workmen and mine supplies will be lowered.

Hammond Colliery.—A tunnel from Mammoth to Buck Mountain seam has been driven on third level connecting with the sump gangways of these two seams. A new column way and a new steamway are in course of construction in Buck Mountain seam west of No. 2 slope.

Bast Colliery.—An additional ventilating fan has been constructed at the extreme eastern limit of the colliery, which is giving excellent results, and two tubular boilers added to steam plant.

Draper Colliery.—A tunnel has been driven from the Orchard to Diamond seam, second level; also tunnel from Mammoth to Buck Mountain, fourth level, and one from Mammoth to Holms, fourth level.

## Lehigh Valley Coal Company

## Packer No. 2 Colliery

A new Knowles and Goyne pump, 20x10x24 inches has been put in place on second level, and concrete floors put in pump rooms, and a new column line to surface, diameter 10 inches. A new pump room on fourth level with stone walls on side and concrete floor, in which is placed a Goyne pump, 24x10x36 inches, also a new 10 inch column line from fourth to second level in Tender slope. A new 8 inch steam line from boilers to second level, and a 6 inch line from second level to fourth level, doing away with all other small steam lines. Completed Tender slope to fourth level and started to sink this slope another lift. A tunnel has been driven from the Holms to Orchard seam on the second level. Orchard seam is 11 feet thick and good coal; gangways are now driven east and west 300 feet from turnout. A tunnel is being driven in West Buck Mountain gangway, fourth lift.

## Packer No. 3 Colliery

A new fanway completed in the seven foot seam, and erected on this opening a new fan 18 feet in diameter, blades 4½x6 feet, size of engine 16x18 inches. Built a new pump room 24x36 feet, stone walls on sides, concrete floor and roof secured with wrought iron beams. Put in place a Stroh duplex pump 26x8x36 feet on second level, and a new 10 inch column line to surface from 24x10x36 feet Jeanesville duplex pump, and have completed a new column way in the Mammoth seam from second level in which these columns are placed to surface. On the seventh level, Mammoth seam, all the timber has been taken out near the pump room and sides secured with stone walls and roof secured with trails and brick.

## Packer No. 4 Colliery

On the third level, Mammoth seam a new pump room has been built, sides secured with stone walls and concrete floor, in which is placed a new Goyne duplex pump 26x10x36 inches. On the fifth level, Mammoth seam, a new pump room has been built. From the Buck Mountain slope, third level, a new 8 inch steam line has been put in place through the tunnel to Mammoth engine and pumps.

## Packer No. 5 Colliery

The fan on top of shaft has been remodeled and can be changed into a force fan in a very short time. It is now called a combination fan. The air compartment of shaft has been lined from top to bottom with double tongued floor-boards 11 inches thick. A fan has

been built at No. 1 slope similar to that at the shaft. Have driven a tunnel on slope level from Holms to Orchard seam, a distance of 239 feet; vein in good condition and 9 feet thick. A new tubular boiler plant 1,200 horse power has been erected, and a new steam line, diameter 6 inches, has been put in place from this steam plant to No. 1 slope, a distance of 4,000 feet.

## Susquehanna Coal Company

William Penn Colliery.—Have built new supply store, carpenter and blacksmith shops, new stables, pipe and sheet iron house, new Babcock & Wilcox boiler, water hoisting engines 32x48 inches on No. 2 shaft; two water tanks, capacity 1,500 gallons each, can hoist 60 to 70 an hour or 107,500 gallons an hour; all the pumps have been stopped; telephone line in No. 2 shaft.

## Mine Foremen's Examinations

The following is a list of the persons who successfully passed the examinations:

## Assistant Mine Foremen

David W. Price, Shenandoah; Andrew Bishop, Shenandoah; Daniel Lafferty, Shenandoah; William Leary, Shenandoah; Peter J. Harkins, Shenandoah; James McAtee, Shenandoah; John Casenskil, Shenandoah; John Rearden, Shenandoah; Michael J. Brennan, Shenandoah; George Oates, Shenandoah; Adam Kantner, Shenandoah; James Powell, Shenandoah; John Hooper, Shenandoah; Nick Bayar, Shenandoah; Edward Whalen, Shenandoah; Richard K. Boelecke, Shenandoah, Wiliam C. Collins, Shenandoah, James Mitchell, Shenandoah; Thomas Stack, Shenandoah; Samuel Powell, Shenandoah; Arthur Dixon, Shenandoah; John White, Shenandoah, John H. Roberts, Shenandoah; Charles I. Eisenhower, Shenandoah; Matthew Fahey, Shenandoah; Patrick McManus, Shenandoah; Thomas O'Hearn, Shenandoah; Thomas Walsh, Shenandoah; Harry Reeves, Shenandoah; Robert Lord, Shenandoah; David McElhenny; Shenandoah; P. J. Conway, Shenandoah; James Rosewall, Shenandoah; Edmund J. Thomas, Shenandoah; John W. Reese, Shenandoah; James C. Kerwin, Shenandoah; Charles H. Zimmerman, Shenandoah; Peter Ringheiser, Shenandoah; Walter S. Johnson, Shenandoah; Patrick J. Covle, Shenandoah; Thomas Tracey, Shenandoah; Thomas E. Edwards, Shenandoah; Edward Williams, Shenandoah; James J. Devitt; Shenandoah; George Hanna, Shenandoah; Michael Hurley, Shenandoah; Thomas E. Jones, Shenandoah; Frank Dove, Shenandoah; Archibald Hodgert, Shenandoah; Jonas Gilfillan,

Shenandoah; John Bordner, Shenandoah, William T. Needs, Jr., Shenandoah; Emil J. Bayar, Shenandoah; John Bunn, Shenandoah; Shem Evans, Shenandoah; Thomas J. McGeever, Shenandoah; James Moyer, Shenandoah; Idris Davis, Shenandoah; John Watson, Shenandoah; Jno. J. Lannon, Shenandoah; John Simmons, Shenandoah; Patrick Brennan, Shenandoah; Thomas E. Campbell, Shenandoah; Fred. Young, Ashland; Aaron Reese, Ashland; Evan W. Smith, Ashland; Michael Maddin, Ashland; Joseph Corbe, Ashland; Frank Dewey, Ashland; Thomas Ferguson, Lost Creek; Michael P. Neary, Lost Creek; Frank B. Garvey, Lost Creek; Thomas Jordan, Lost Creek; John Whalen, Lost Creek; John O'Brien, Lost Creek; Patrick Brennan, Lost Creek; Charles Klingerman, Girardville; William Taylor, Girardville; Harry Whittington, Girardville; Thos. Green, Girardville; Harry R. Shipp, Girardville; James Birmingham, Gilberton; Thomas V. Morgan, Gilberton; William Chappell, Gilberton; Edward Oakim, Gilberton; William Stanton, Gilberton; Thomas Barnet, Gilberton; Richard Jones, Gilberton; Isaac Purnell, Gilberton; Henry Gottschall, Gilberton; Albert Thomas, Gilberton; James Rafferty, Gilberton; Thomas J. Reese, William Penn; John Baskeyfield, William Penn; Joseph Peters, William Penn; Evan L. Jones, William Penn; Thomas Sweeney, William Penn; Charles Blonwerd, Mahanov Plane.



## Eleventh Anthracite District

SCHUYLKILL COUNTY

Mahanoy City, Pa., February 23, 1904.

Hon. James E. Roderick, Chief of Department of Mines:

Sir: I have the honor of submitting herewith my Annual Report as Inspector of Mines of the Eleventh Anthracite District for the year 1903.

The tables contain the statistics relative to production, number of employes, days worked, accidents, etc. A brief description of the condition of the collieries of the district is also given.

Respectfully submitted,

P. C. FENTON, Inspector.

## Eleventh Anthracite District, 1903 SUMMARY OF STATISTICS

Number of mines in district,	13
Number of mines in operation,	13
Number of tons of coal produced,	3,978,269
Number of tons shipped to market,	3,511,378
Number of tons sold at mines to local trade,	39,688
Number of tons consumed at mines in generating steam	
and heat,	427,203
Number of persons employed inside the mines,	5,549
Number of persons employed outside,	3,272
Number of fatal accidents inside the mines,	30
Number of tons produced for each fatal accident,	132,609
Number of persons employed per fatal accident inside,	185
Number of fatal accidents outside,	4
Number of persons employed per fatal accident out-	
side,	818
Number of wives made widows by fatal accidents,	14
Number of children orphaned by fatal accidents,	25
Number of non-fatal accidents inside of mines,	74
Number of persons employed per non-fatal accident in-	
side,	75
Number of non-fatal accidents outside,	10
Number of persons employed per non-fatal accident out-	
side,	327
Number of steam locomotives used inside,	16
Number of compressed air locomotives used inside,	6
Number of fans used for ventilation,	-24
Number of gaseous mines in operation,	13
Number of new mines opened,	1

## TABLE A.—Eleventh Anthracite District, 1903

## PRODUCTION OF COAL

Names of Companies	Tons
Philadelphia and Reading Coal and Iron Company,	3,153,182
Crystal Run Coal Company,	45,304
Silver Brook Coal Company,	151,189
Lehigh Valley Coal Company,	242,047
Lentz and Company,	386,547
Total,	3,978,269
Production by Counties	
Schuylkill,	3,978,269

Fatal and non-fatal accidents; number of tons of coal produced per accident; number of persons employed; number employed per TABLE B.—Eleventh Anthracite District, 1903

	əbistı	Number of employes or per non-fatal accident	378 58 327	_
	abisti	Number of employes or	881 224 	
	əbian	i sevolqme to redmuN tabicos istsi-non req	353 383 181	
	əbisn	Number of employes i	165 2877 191 185	
	sə.	Total number of employ	6, 937 799 556 192 337 8, 821	
	əbiz	Number of employes out	2,644 173 173 156 156	
	əpis	Number of employes in	4,293 575 383 117 181	2000
	Der Je	beoubord face to anoT biani institution	52, 553 331, 522 242, 647 151, 189	
	per	Tons of coal produced fatal accident inside	191, 276 1, 989, 134 121, 023	Tot. 100
nt	idents	IstoT	12 4 4 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	- to
accident	Non-fatal Accidents	əbizinO	t- 00	e e
	Non-fa	əbizaI	122	4.1
	ents	Total	8000	45
	Fatal Accidents	Outside	œ н	-11
	Fata	əbiznī	988	08
5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5		Names of Companies	Coa.	Totals and averages for district,

(draid total)

TABLE C.—Eleventh Anthracite District, 1903 Classification of Fatal Accidents

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f Min		stroisoldze relimi vili	
Outside of Mines		Hy suffocation	
Outs		Py machinery	6.1
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		Spisul Intoff	0101 m m m m (= 01   60 m (s)   6
		Miscellancous causes	-       -   -
		Sufferented by coal, etc	
		səlnut X;j	
		Seirethed at batteries	
	into	Manways, breasts, etc.	
les	By Falling into	sadets	
f Mir	By F	sileds	
Inside of Mines		By blasts, etc.	
In		Powder and dynamite	
		Emothered by gas	
		By explosion of gas	F
7		By mine enrs	FI 21 21 21 45
	Jo	looH	
	Falls	Slate	+
	By	Coal	гг га га га га га га га га га га га га г
			January, March, Aprell, Aprell, Aprell, Aprell, June, June, Auster, Auster, Auster, Auster, Austernier, Lieconder, Lieconder,
			January, Rebruary, March, Alent, May, June, June, Maust Natust Newember, December, Incomplex, Incom

TABLE D.—Eleventh Anthracite District, 1903 Classification of Non-Fatal Accidents

		Grand total	0 6 6 7 9 9 11 11 11 11 1 1 1 1 1 1 1 1 1 1 1	84
		Spirito InfoT	014   01014   14   14	10
an an		Miscellaneous causes	61 H H H	ru.
Mines		anoisoldzs relied ytl		
Outside of		13y suffocation		:
Outs		Ву тасhінету		-
		By cars		4
		obiani intoT	- 8 C + 6 C C C C 9 9 4 7 L	7.
		Miscellaneous causes	014 4 4	ю
		Suffocated by coal, etc.		:
		By mules		
		Crushed at batteries		
	into	Manways, breasts, etc.		1
les	By Falling into	Slopes		-
Inside of Mines	By F	Shafts		
ıside		By blasts, etc.		11
II		Powder and dynamite		4
		Smothered by gas		
		By explosion of gas	0.4600 rc = 1 = 101	21
		By mine cars	HH00 00 HH00HH	113
	Jo s	PooH	-	
	Falls	Slate		60
	By	(081	2014 HH2 0H H	14
			January, February Amreh, Amreh, Max. June, June, June, August, September, November,	Totals,

Occupations of Persons Killed or Fatally Injured Inside and Outside the Mines TABLE E.—Eleventh An thracite District, 1903

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	VII office on by Yes	eo
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Outside	(syod) stodoiq obils	
	Engineers and firemen	
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	stratists bar sessor aid	
	Assistant mine foremen	
	уние токовов	
		January.  Jeanuary.  Marek.  Marek.  Marek.  Mar.  Jan.  Jan.  Marinst.  Mar

TABLE F.--Eleventh Anthracite District, 1903 Occupations of Persons Injured Inside and Outside the Mines

	fished total	001-01117010141	84
	Spistuo IntoT	01H 010H H H	10
	All other employes	94 (96) H	~
	Воок-кеерегs and сlerks		
	Slate pickers (men)		
Outside	Slate pickers (boys)		-
	Engineers and fremen		-
	Elacksmiths and carpenters		
	nemend shizino		
	Superintendents		
	96izni intoT	F85-480 C1 997	4-
	sevolqune redito IIA	1	***
	пэт управу		!
	Pumpmen		
	Door boys and helpers		
Inside	Drivers and runners	AA A AAQA	00
	Miners' laborers	H 80 H 44 H 61	17
	Miners	& & & & & & & & & & & & & & & & & & &	45
	Fire bosses and assistants		-
	Assistant mine foremen		
	Mine foremen		
		January, February, March, May, Must, May, June, July, September, Sociober, November,	December,
			is,
		nry, h, st, mber	Tota
		anus Pebru April Iay, une, ully, vugu	Jece

## TABLE G.—Eleventh Anthracite District, 1903

Nationality of Persons Killed or Fatally Injured Inside and Outside the Mines

American de american de la companya							2
	American	Lish	German	Polish	Austrian	Russian	Totals
January, February,				2			2 5
March,				1			1
May, June, July,			1	1			1 8
August, September,	1						2
October, November, December.				3	1		4 3
Totals,	3	1	1	27	1	1	31

TABLE H.—Eleventh Anthracite District, 1903 Nationality of Persons Injured Inside and Outside the Mines

	American	English	Scotch	rish	German	Polish	Italian	Lithuanian	Tyrolian	Totals
January, February, March, April, May, June, July August, September, October, November, December,	24 21 1 1	1	1	3 1	1	5 6 6 4 4 6 4 4 2 5 4 2 5		1	1	9 9 7 6 11 11 5 2 6 7 4
Totals,	12	4	1	- G	2	53	2	3	1	84

TABLE I.—Eleventh Anthracite District, 1903

Operators and mines, kind of openings, type and size of fans, size of furnaces, volume of air produced by fan or furnace per minute, number of splits of air currents, number of persons employed inside, and quantity of air produced for each employe per minute

11	
Average number of cubic feet per minute provided for each person	325 203 218 205 215 323 156 169 169
Number of persons employed	167 108 803 803 164 1190 1172 5144 444
Number of cubic feet per minute passing out at out- let	66,077 89,000 117,228 46,680 42,220 74,053 274,535 92,080 83,070
rog ris to vilusaup lstor Ils ni Bnitsluorio etunim 1991 ciduc ni stilgs ent	54,350 22,000 1175,228 33,665 40,806 55,900 45,325 69,120 92,080
Number of cubic feet of air for minute entering the minute at inlet	64, 521 38,000 129, 124 44,010 65,515 572,913 178, 889 85,485
Number of splits of air cur-	75 7 7 15 15 10 10 10 11 10 11 11 11 11 11 11 11 11
Power used	Steam Steam Steam Steam Steam Steam Steam Steam Steam Steam Steam
nel lo smgN	Gulbal, Gulbal, Gulbal, Gulbal, Gulbal, Gulbal, Gulbal, Gulbal, Gulbal, Gulbal, Gulbal, Gulbal, Gulbal,
Water gauge developed-in	191191919199
Number of revolutions per minute	202 829 25 25 25 25 25 25 25 25 25 25 25 25 25
Depth of blades in feet	664466425544667
Tidth of blades in feet	# 51
Diameter of fan in feet	200 200 200 200 200 200 200 200 200 200
Method of ventilation	Fan. Fan. Fan. Fan. Fan. Fan. Fan. Fan.
Gaseons or non-gaseous	Gaseouus, Gaseouus, Gaseouus, Gaseouus, Gaseouus, Gaseouus, Gaseouus, Gaseouus, Gaseouus, Gaseouus, Gaseouus, Gaseouus, Gaseouus,
Kind of opening	Slope Slope Slope Slope Slope Slope Slope Slope Slope Slope Slope Slope Slope
Names of Operators and Mines	Elangowan, Ellangowan, Ellangowan, Blangowan, Rapie Hill, Ray Hill, Ray Hill, St. Nicholas, North Mahanoy City, Tunnel Ridge, Tunnel Ridge, Tunnel Ridge, Suffolk, Suffolk, Salver Brook, Silver Brook,

208		269		256
70 292 30		297	11 11 11	117
77,0		118,400		30,000 117
60,650		80,000		30,000
72,670 60,650		92,000		30, 000
c1	H	4	li	61
Steam] 2		Steam] 4 92,000 80,000 118,400 297		Steam,.]
1-4 Guibal, .	·	Guibal,	- dungar.	Guibal, .
1	4	610	N	22.28
92	017	08	90	65
4-6 92	2	41/2	41	1-9
4.6	2/2	431 4	4	3-9
16	2	16	4	S 16
Fan,	F dill,		Fan,	Fan,
Gaseous,	Craseous,	Slope, Gaseous,	Gaseous,	Gaseous,
Slope,	orc De	Slope,	: 10.00	Slope,
Lehigh Valley Coal Co.	Frimrese,	Park Place,	Park Place,	Crystal Run Coal Co. Broad Mountain, Broad Mountain,

Operators, Location of Collieries, Railroads, Etc. TABLE 1.—Eleventh Anthracite District, 1903

Railroad to Mine	Philadelphia & Reading Philadelphia & Reading	Lehigh Valley	Lehigh Valley Philadelphia & Reading	Lehigh Valley
P. O. Address	Pottsville, Pottsville, Pottsville, Pottsville, Pottsville, Pottsville, Pottsville, Pottsville,	Hazleton,	Park Place,	Silver Brook, Lehigh Valley
Name of Superin- tendent	John Veith, John Veith, John Veith, John Veith, John Veith, John Veith, John Veith, John Veith, John Veith,	W. H. Davis,	Edward Reese, Mahanoy City, James Reese,  John L. Williams, Frackville, John L. Williams	James Long,
P. O. Address	Pottsville Pottsville Pottsville Pottsville Pottsville Pottsville Pottsville Pottsville Pottsville	Wilkes-Barre,	Mahanoy City, Frackville,	John L. Wentz, High Girard Trust Building, Phila.
Name of General Superintendent	W. J. Richards W. J. Richards W. J. Richards W. J. Richards W. J. Richards W. J. Richards W. J. Richards W. J. Richards W. J. Richards W. J. Richards W. J. Richards W. J. Richards	S. D. Warriner,	Edward Reese, John L. Williams,	
County	Schuykill, Schuykill, Schuykill, Schuykill, Schuykill, Schuykill, Schuykill, Schuykill, Schuykill,	Schuylkill,	Schuylkill, Schuylkill,	Schuylkill,
Names of Operators and Collieries	P. and R. Coal and Iron Co. Knickerbocker. Ellangowan, Maple Hill, Saint Nicholas, Boston Run, Tunnel Ridge, Mahanoy City, North Mohanoy, Saint Nicholas washery,	Lehigh Valley Coal Co. Primrose colliery,	Park Place colliery,	Silver Brook Coal Co

TABLE 2.—Eleventh Anthracite District, 1903

Number of tons of coal mined in each colliery, number of days worked, number of persons employed, number killed and injured,

	orinnaryl to shaued to redund besu solum bus sessed to redund.	高速度及方面内容性 高速度是分离等的是 高速度是分离等的是 高速度高速光度的最	6 1976	270,715	7.9 0 12	19,550 33	31.67
	bosu referred to sgod to redmiX.	23 25 25 25 25 25 25 25 25 25 25 25 25 25	62, 615	610,615	· 		7,031
	Number of non-fatal accidents	300000000000000000000000000000000000000	5	2.9		-	
	strobious latal to redenuz	01.80 c) ± c) 00 c) 0	8	ŝi			] co
	soyoldinə io rədinin	45 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1		6,987	192	2327	99
	Number of days worked	* # # # # # # # # # # # # # # # # # # #	981		11 21		21
etc.	anot ni laco to noitenborq later	28.89.89.89.89.89.89.89.89.89.89.89.89.89	8,114,975	3,173,183	1 6 5	151,189	
use a.	Number of tons sold to local Yumber of tons sold to local	843 E1182	25. 1.5	631,155		11.311	3, 403
of kegs of powder	masis tol besu suot to techniz suitent at tollieries	3633333333 363735533 3637355533	341,815	311, 113	9,940	30,000	17,50
	Sumber of tons of coal shipped in the coal shipped		12, 207	2,778.24+	34,×11	119,545	221, 111
Tagillari Tagillari	County	Schuylkill, Schuylkill, Schuylkill, Schuylkill, Schuylkill, Schuylkill, Schuylkill, Schuylkill,	Schuylkill,		Schuylkill,	Schuylkill,	Schuylkiil,
	Names of Operators and Collicries	Philadelphie and Reading Coal and Iron Co. Knuck she ker. Silvaneswan, Sufferde. Sufferde. Sufferde. Sufferde. Sufferde. Sufferde. Sufferde. Sufferde. Sufferde. Managen Tage. Managen Tage. Managen Tage.	Saint Nicholas washery,	Totals,	Frastal Run Coal Co. Broad Mountain Colliery.	Silver Brook collecty.	Lehikh Valley Coal Co. Primrose: colloery,

\*Totals in this column are averages.

TABLE 2-Continued

Number of horses and mules	102	806
Number of pounds of dynamite	18,088	319,580
Number of kegs of powder used	9,047	80,054
Number of non-fatal accidents	150	\$5
Number of fatal accidents	60	34
Number of employes	799	8,821
Number of days worked	241	
Total production of coal in tons	386,547	3, 978, 269
Number of tons sold to local trade and to local	1,282	39, 688
Number of tons used for steam and heat at collieries	27,957	427,203
Number of tons of coal shipped by rail or otherwise	357, 308	3,511,378
County	Schuylkill,	
Names of Operators and Collieries	Park Place collery,	Grand totals,

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	250,715 8,900 9.990 31,887 18,088	319,580
	62, 615 545 823 7, 624 9, 047	80,054
	67	84
	S : 10 m	34
	6,937 1 2 337 556 799	8,821
*	256 252 238 242 241	245
	3, 153, 182 45, 304 151, 189 242, 047 386, 547	3,978,269
	32,0 9 563 1,341 3,403 1,282	39,688
	341, 843 9, 900 30, 000 17, 503 27, 957	427, 203
	2, 778, 230 34,841 119,848 221,141 357,308	3,511,378
	Schuylkill, Schuylkill, Schuylkill, Schuylkill, Schuylkill,	
	Philadelphia and Reading Coal and Iron Co., Crystal Run Coal Co., Silver Brook Coal Co., Lehigh Valley Coal Co., Lentz and Co.,	Totals,

\*Not including washeries.

## TABLE 2-Continued

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Det.	eoritus of berevileh vitiman() snollas-einnim	2 2 2 1 1 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	24,950	338	5,950	9, (40)	4,500	37,338
əşr	unim 19q shollsa ni Vilosqs')	8, 4, 114, 11, 11, 4, 12, 14, 17, 17, 18, 18, 18, 18, 18, 18, 18, 18, 18, 18	37, 491	2	0.250	8 1	4.80	52, 321
Suir	Number of pumps delive	ক্তক (তেগ্র	50	61	9	1.5	65	92
	Town served for T	2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	5, 75	460	1.248	1, 530	1,510	30,699
Ils 1	Number of steam engines or	9//8/37==================================	=		6	11	£:	5 8
ves	Electric							
Locomotives	1; V	21 22 -	e					9
Iroc	ms-t2		Ξ		c1	,-	c)	12
	Tetal herse power	#188899E83	15,984	4.0	1,230	1,500	3.250	27, 464
SIS	Horse power	828825E22 Haddaddad	17,540	2	1.9.0	0 1	3, 256	24,420
of Boilers	Tubular	######################################	. 62	+5	-	- I	1 22	174
Number of	Town 9stolf	<b>Z</b>	1,014	1 :!				1,044
Ź	lsoinbuilt(')	a : : : : : : : : : : : : : : : : : : :	:1	:	:			200
	County	S S S S S S S S S S S S S S S S S S S		sehmythill	sehvylkill	Schuylkill,	Schuylkill,	
	Names of Operators and Collieries	-Politolephilit and Beading Coal and Iron Co. Knitzberton act. Subschools. Subschools. Sant Neb las. Bascon Ran. Turnel Redes. Mehan w City. Markin Markan. Markan. Markan. Markan. Markan. Markan. Markan. Markan. Markan.	Totals,	Crystal Run Coal Co. Broad Munitain ediliery,	Silver Brook Coal Co.	Lebith Valley Coal Co.	Park Place collibery,	Grand totals,

# TABLE 2-Recapitulation

	REFORM OF THE	
	Number of air compressors	10
	Number of electric dynamos	
19d (	Quantity delivered to surface	21,950 338 5,250 2,000 4,800 37,338
÷	Capacity in gallons per minu	37,491 780 5,250 4,600 4,800 52,321
Suing	Number of pumps delive water to surface	# 01 @ F G
	Total horse power	25,719 400 1,240 1,430 1,510 30,699
Ils :	Number of steam engines of	142 4 19 11 11 203
res	Electric	
Locomotives	γίΑ	9
Loce	Steam	11 2 11 2 16
	Total horse power	18,984 480 1,250 1,500 3,250 25,464
STS	Horse power	17,940 1,240 1,500 3,250 24,420
f Boile	Tubular	138 8 8 10 113 174
Number of Boilers	Horse power	1,044
ž	Cylindrical	83
	County	Schuylkill, Schuylkill, Schuylkill, Schuylkill, Schuylkill,
	Names of Operators and Collieries	Philadelphia and Reading Coal and Iron Go Crystal Run (vold Co., Silver Brook Coal Co., Lehigh Valley Coal Co., Lentz and Co., Totals,

TABLE 3.—Eleventh Anthracite District, 1903 Number of Each Class of Employes at Each Colliery

	Grand total inside and outside.	1, 654 1, 263 1, 263 848 835 835 835 835 835 838	116.	26	.937	192	337
	Total outside	361 310 310 310 310 310 310 310 310 310 31	618 6,	26	644 6,	75	921
of Persons Employed Outside	All other employes	01111111111111111111111111111111111111	109 2.6	133	61	41	122
wood ,			25 1,10		26 .1,132		
Jums	Dook-keepers and clerks			-		   -   -	
l and	Slate pickers (men)	522 233 4 5 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	320		320	<u> </u>	16
Pare	Slate pickers (boys)	138 113 150 150 150 150 150 150 150 150 150 150	861		861	17	22
ns of	Engineers and Aremen	84444444	232	63	234	6	50
Occupations	Blacksmiths and carpenters	∞ × ⊃ 10 t − 10 10 t − ∞	63	:	63	0.	00
Deen	Outside foremen		00		00	-	
	Superintendents		:	_:	:	-	
	T'otal inside	293 706 803 803 544 402 458 361 515			4,293	117	181
side	All other employes	86 104 165 132 107 107 161 78 118			1,018	7	43
red In	Соппрану теп	15.0 14.0 15.0 15.0 15.0 15.0 15.0 15.0 15.0 15			351	25	∞
mplos	Dumpmen	ে কক			10	9	6
ns E	Door-boys and helpers	8 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2			91	1	4
Perse	Livers and runners	15 61 61 18 18 18 16 16 17		:	276	6	16
Occupations of Persons Employed Inside	мілетз' ізрогетз	76 280 149 134 134 135 135 135 135 135			1,054	12	#
patic	Miners	68 202 339 204 204 40 140 1177			407	54	57
Ocer	Fire bosses and assistants	► 특립≈ 10 0 1 0 0 4			58 1	-	
	Assistant mine foremen	H-0			00		
	Mine foremen	нопонення	:1	:	10	-	61
	County	Schuylkill, Schuylkill, Schuylkill, Schuylkill, Schuylkill, Schuylkill, Schuylkill, Schuylkill, Schuylkill,		Schuylkill,		Schuylkill,	Schuylkill,
	Names of Operators and Collieries	F. and R. Coal and Iron Co. Knickerbocker, Eliangrovan, Maple Hill Suffolk, Salnt Nicholas, Boston Run, Tunnel Ridge, Mahanoy City, North Mahanoy.		Saint Nicholas washery,	Totals,	Crystal Run Coal Co. Broad Mountain,	Silver Brook Coal Co.

# TABLE 3-Continued

	Grand tetal inside and outside	556 799 8, S21
side	Total outside	17.3
Occupations of Persons Employed Outside	sevolqme tahlo llA.	1.383
nploye	Всск-кееретз яла светкя	c)   10   t-
ns En	Flate pickers (mem)	12 10 10 118.
Perso	Sate pickers (boys)	35 998
ns of	Engineers and firemen	31 31
atic	Blacksmiths and carpenters	111 25   11
ecur	namarol abishuO	-11 -12
0	Superintendents	C1   T
	əbizni istoT	383
ıside	All other employes	109
Occupations of Persons Employed Inside	Company men	113
Smplo	I)umpmen	4 11 15
sons E	Doct-beys and helpers	6. 6. 7.
f Pers	Drivers and runners	39 46 3 × 6
o suo	Miners' laborers	1,307
cupati	Miners	245
. 00	Fire bosses and assistants	e   e   e
	Assistant mine foremen	- C   E
	memerol eniM	1 1 2 B
	County	Schuylkill,
	Names of Operators and Collieries	Lehigh Valley Coal Co. Primrose colliery, Lentz and Co. Park Place colliery, Grand totals,

TABLE 3-Recapitulation

	6, 937 192 337 556 799 8, 821	
	2, (44 T5 156 173 224 3, 272	
	1,133 1,133 1,138 1,088	
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	320 Hg 10 118 418	_
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	1,018 7 43 109 1,177	
	351 25 8 8 113 497	
-	100 00 41 124 134 134 134 134 134 134 134 134 134 13	
	91 1 2 2 2 107	_
	276 9 116 29 46 46	
	1, r64 12 41 44 146 1,307	
	1,407 54 57 173 249 1,940	_
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	51 22 2   51	
	Schuylkill, Schuylkill, Schuylkill, Schuylkill, Schuylkill,	
	P. and R. Coal and Iron Co. Crystal Run Coal Co. Silver Brook Coal Co. Lehigh Valley Coal (Co. Lentz and Co. Totals.	

TABLE 3-Continued

				. !							1			
Names of Operators and Collieries	County	January	February	, March	lingA	May	June	Ylut	August	zel4cmber	चलकि ।()	Xovember -	Гиссипрет	sistoT
Philadelphia and Reading Coal and Iron Co. Knickerbooker. Plangwayan Majde Hill, Suffolk. Saint Nicholas, Found Run. Tound Run. Mahamoy City. North Mahanoy.	Schuylkill Schuylkill Schuylkill Schuylkill Schuylkill Schuylkill Schuylkill Schuylkill Schuylkill Schuylkill	9.555555 5.55 E.33555555555	25455453		0031000000 53545544	- Talaalala		883783989	อีทิธิสุสสัตน์ด	HA HATIKI	មុំ គឺ គឺ គឺ គឺ ។ គំពីពី គឺ គឺ គឺ ។	\$ 65445555555555555555555555555555555555		##T#######
Averages,		71	20.9	61 61 1	17.8	·	[ [	9.15	- ·	27	878	17.6	17.4	993
Crystal Run Coal Co. Broad Mountain,	Sehuylkill,		ŝî	1-		5. 81	3. 88	61	01 40 1	*.	63 53	- - 61	63	61
Silver Brook Coal Co.	Schuylkill,	§]	18.6	20.5	5	6,05	5.1	20.7	19.8	19.9	17.13	16.8	12.3	983
Lehigh Valley Coal Co. Primrose colliety.	Schuylkill,	1 55	65 63	2	121		31	÷ i		16.7	1.5	15.4	16.4	53
Dark Place colliery,	Schuylkill,	6.12	8.	20.9	18.5	e: 53	7	:: ::	7.	65	16.9	16.6	19.4	241
Averages,		61	21.2	21.3	ŝì	51	31 31	1.	81	50.00 50.00	15.3	t = t = t = t = t = t = t = t = t = t =	5.5	13.
		TABI	王 3—	Recapi	TABLE 3—Recapitulation	n								
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TABLE 4.—Eleventh Anthracite District, 1903
Fatal Accidents in and about the Mines

	Nature and Cause of Accident in Brief	Instantly killed by a fall of coal. Instantly killed. Crushed between car	and root.  Internally injured by a rush of coal.	Instantly killed. Caught in the scraper	Internally injured between roller and casing in breaker February 19. Died at	State Hospital July 11. Scalded and leg broken by falling down	y an explosion of gas.	Injured by a fall of coal. Died the same	Instantly killed by a fall of rock.  Face and hands burned by an explosion of	Bas. Died at the State Hospital May 22. Head crubed between mine car and door.	I Drou Julle's hy a fall of rock. Instantly killed by mine locomotive. Instantly killed by mine locomotive. Instantly killed by falling down slope. Instantly killed by a fall of top coal. Instantly killed by a fall of slate. Instantly killed by being run over by a	Eduloda.  Instantly killed by a fall of coal.  Drowned by a rush of water from Emickerbocker colliery.
sai	County	Schuylkill, Schuylkill,	Schuylkill,	Schuylkill,	Schuylkill,	Schuylkill,	Schuylkill,	Schuylkill,	Schuylkill, Schuylkill,	Schuylkill,	Schuylkill, Schuylkill, Schuylkill, Schuylkill, Schuylkill, Schuylkill,	Schuylkill, Schuylkill, Schuylkill, Schuylkill, Schuylkill,
and about the milles	Name of Colliery	Tunnel Ridge,	Mahanoy City,	Mahanoy jig house,	Park Place,	Ellangowan,	Mahanoy City,	Ellangowan,	Ellangowan,	Maple Hill,	Suffolk, Maple Hill, Park Place, Suston Run, Suffolk, Saint Nicholas,	Maple Hill, Ellangowan, Ellangowan, Ellangowan, Ellangowan,
E	Number of orphans	64	:	:	:	:	:	:	67 :	:	4 : : : : :	1::21
	Number of widows	<b>-</b> :	:	:	:	:	:	Н		:		:-
aen	Married or single	io K	vi	vi	υż	υż	σi	, Z	Z v.	vi	KWKKWK	KwwKK
CCCI	Age	22	24	19	32	14	37	55	88	17	35 35 35 35 35 35 35 35 35	34844
Fatal Accidents	noitequooO	Miner,	Miner,	Watchman,	Slate picker,	Slate picker,	Miner,	Miner,	Miner,	Door boy,	Miner, Loader, Laborer, Laborer, Miner,	Miner, Miner, Laborer, Laborer, Miner,
	Nationality	Polish,	Polish,	American,	Polish,	Polish,	Polish,	Polish,	Polish,	Polish,	Polish, Polish, Polish, Polish, Polish, Irish,	Polish, Polish, Folish, Polish, Polish,
	Name of Person	Bolest Veretsky, Joe Lewonis,	Joseph Bolensky,	Peter Hellanthell,	Andrew Vizarra,	William Breaskie,	Mike Mitsko,	John Luto,	Anthony Skummin,	Peter Pieski,	Anthony Shedeski, Joseph Cheronis, William Carlunas, Anthony Melutis, Patrick Whalen, Jacob Kester,	John Aranovich, Alex Lynch, Mike Yanockski, Matt Shevinski, Peter Kleckner,
	Date of accident	Jan. 6	Feb. 14	19	20	21	25	March 11	April 10 May 12	June 5	6 11 17 17 17 18 18	. 222222

nd	at	nd ,	W. Charles		ar	z E	
Aug. 21 Peter Sneck, American, Locomotive 25 M. 1     Knickerbocker,   Schuylkill.   Killed by being caught between door and	loc-motive. Killed by a rush of coal. Killed by a fall of clod. Leg broken by a fall of coal. Died at	State Hospital October 23. Killed by being crushed between prop and	giga		Killed by being squeezed between car and mule.  Was hit with a harmon while helding a	Jumper for his butty. He died from lockjaw December 25. Killed by falling under a car.	
мееп	coal.	ween	rib. Killed by a fall of top coal. Killed by a fall of eal from the side	n slop	betw	le di	
t bety	al. d.	d betr	coal.	coal.	ezed	ty. I	
augh	of co of cla	Octob	f top	dowr	nhs	s but ser 25 under	
eing	rush fall by	pital eing o	fall c	fall	being	or hi	
by b	locomotive. Cilled by a r Killed by a f	e Hos	by a	by f	illed by and mule.	Jumper for his butt lockjaw December 25. illed by falling under	
Killed	locomotive. Killed by a rush of coal. Killed by a fall of clod. Leg broken by a fall o	Stat	rib. Killed Killed	Killed by falling down mai	Killed and Was	Jum Jock Killed	
killi.	Kill,		cill.		ili ii	Polish Driver, 18 S Maple Hill Schuylkill. Killed by falling under a car.	-
chuyll	Schuylkill, Schuylkill, Schuylkill,	Schuylkill,	Schuylkill,	Schuylkill, Schuylkill,	Schuylkill,	huyll	
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Knie	Maha Park Tunn	Polish, Laborer, 20 S Knickerbocker,	Prim	Austraan, Mimer, 42 M. 1 3 Boston Run, Polish, Laborer, 21 S Mahanoy City,	Polish, Miner, 48 M. 1 3 Saint Nicholas Schuylkill.	Mapl	
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Peter	27 Jack Hemsky.       Polish.       Jahrer.       26 S.       Mahanoy City.         17 Joseph Ginler,       Russian.       Lahorer.       37 S.       Park Place.         20 Iraul Resalusky.       Polish.       Miner.       35 M. 1 3 Tunnel Ridge.	21   Frank Karish,	4 William Romonofsky, Polish,	Joseph Skeakes, Anthony Shagalis,	16 Joseph Metules,	23 Joe Puscavage,	
21 1	27.53	21 1	4. I - C	200	16	23	-
ng.	Oct.		Nov.	Dec			
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TABLE 5.—Eleventh Anthracite District, 1903 Non-Fatal Accidents in and about the Mires

Nature and Cause of Accident in Brief		Face and hands burned by an explosion Face and hands burned by an explosion of gas.  Face out by a fall of coal.  Face out by a premature blast.  Leg bruised by a fall of coal.
County	Schuylkill, Schuylkill,	Schuylkill, Schuylkill, Schuylkill, Schuylkill, Schuylkill,
Name of Colliery	Primrose,  Tunnel Ridge,  North Mahanoy,  Nortin Mahanoy,  Park Place,  Mahanoy City,  Saint Nicholas,  Maple Hill,  Mahanoy City,  Tunnel Ridge,  Tunnel Ridge,  Saint Nicholas jig house	Suffolk, Mahanoy City, Marls Hill, Suff-Mahanoy,
elgnis ro beitrald		NZZ Z W
∂\$v	## ## ## ## ## ## ## ## ## ## ## ## ##	
noitsquooO	Miner, Miner, Miner, Miner, Miner, Miner, Miner, Miner, Miner, Car runner, Car runner, Miner, Car runner, Miner, Laborer, Laborer,	Minor.  Minor.  Wither.  Minor.
Vationality	Italian, American, Polish, Polish, Pclish, Pclish, Pclish, Polish, Polish, Polish, American, Polish,	Polish,
Name of Person	5         Walter Banks,           7         John Gsoda,           7         Frank Knitsky,           12         Andrew Riddle,           13         Joseph Gurchuck,           14         Joseph Gurchuck,           15         George Zelinsky,           19         Charles Yewcufskey,           19         Charles Yewcufskey,           2         Martin Sincavage,           2         William Brennan,           12         William Brennan,           13         Michael Sachel,           14         Thomas Miller,	Mike Cossett, William Bobble, John Knopkus, Stiney Sattle.
Date of accident	Jan. 3 12 13 15 16 16 16 16 16	19 25 . 25 . 26 . 26

n explosion n explosion	caught be- caught be- caught be- a premature ever by an	l by an explosion of timber redling l by being eaught feed	ht between n explosion n explosion frum ever tween cars of rock ans, of rock	operion of weler, weler, all in ma-
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	Park Place.  Park Place.  Ellangewan.  Maple Hall,  Ellangowan.  Tunnel Ralae.	North Mahanoy.  North Mahanoy.  Primrose,  Ellangowen.	n. Higher Higher Higher Higher Higher Higher Higher Higher Higher	Baston Run,  North Mahanew.  North Mahanew.  Youth Ridge,  Tunnel Edge,  Fannel Ridge,
<u>.</u> .	KK K K K K K			E wikk wi
W 57 8	4 K 2 P ( H:	8 8 8 4 4		을 <u>소요왕</u> 을 다음
Miner.	Miner. Laborer, Miner. Laborer, Namer.	Laborer, Miner, L.d. e.r., M.mer,	Miner, Laborese, Miner, Lamborese, Miner, Lamborese, Lamborese, Lamborese, Lamborese, Miner, Miner, Miner, Miner,	Starter, Miner, Miner, Miner, Slate picker, Jander,
Polish,	Fullsh. Fallsh. Fallsh. Follsh. Follsh. Follsh. Follsh.	Polish, Polish, Germeth, American,	Folish, Tolish, Tolish, Tolish, Tolish, Tolish, Tolish, Tolish, Tolish, Tolish, Tolish, Tolish,	American, Ir sh, Daglish, American, Polish, Polish,
Frack Obescavage, Letwa Varosky, withou Mineavage,	Mexum Persis. Theories Powell. Authory Gretiliek. Leminek Framedy.	Martin Alexander, Authory Caster, Frank Clered, Lewis Benedict, Pred Veluma	June Rammous, Then the Petershill Then to the Brightne, Edited to the Silven, Juliu Silli awar, Gorden at Brown, Gorden at Brown, Gorden to the Silven, Andrew to Shook, Andrew to Shook, Andrew to Shook, Andrew to Shook,	Meany Schmidt, Michael Carnady. Themas Returnson, Therar Dennis, Jest Mullis, Lesch Neverousky, Milliny Sturnates.
		17 17 00 H 19 19	5 H HITTER #1979 2	E 2744
Merch	April	May	and and and and and and and and and and	

TABLE 5-Centinued

Nature and Cause of Accident in Brief	Hands, leg and face injured by a prema-	ture explosion. Hands, leg and face injured by a prema-	HH	coal down the manway.  Chest and back injured by a fall of coal.  Leg and arm injured by being caught	between car and door frame.  Hip injured by being bumped between	mine cars. Hands and face burned by an explosion	Foot bruised by a mine car running	Over II. Leg Mand hands burned by prema-	ture blast. Face, body and hands burned by prema-	JA	口田田	blast. Leg cut by a rush of coal. Leg cut by a rush of coal. Hand injured by a premature blast. Squeezael between mine car and timber. Face and hands burned by gas. Collar bone broken by a fall of state. Leg broken by a fall of state.
County	Schuylkill,	Schuylkill,	Schuylkill, Schuylkill,	Schuylkill, Schuylkill,	Schuylkill,	Schuylkill,	Schuylkill,	Schuylkill, Schuylkill,	Schuylkill,	Schuylkill, Schuylkill,	Schuylkill, Schuylkill, Schuylkill,	Schuylkill, Schuylkill, Schuylkill, Schuylkill, Schuylkill, Schuylkill, Schuylkill,
Name of Colliery	Ellangowan,	Ellangowan,	Park Place,	Ellangowan,	Primrose,	Tunnel Ridge,	Park Place,	Ellangowan,	Ellangowan,	North Mahanoy,	Maple Hill, Park Place, Tunnel Ridge,	Maple Hill, Park Place, Silver Brook, Knickerbocker, Park Place, Park Place, Park Place, The Place, The Place, The Place, The Place, The Place,
Married or single	ν.	vi	iz.io	တ်တ်	ωį	υż	w.	က်ကဲ့	vi	∑ vi	KKW	w z z w z z w
₹8€	23	23	50	25	25	98	63	27	23	30	35 35	13 37 38 38 38 26
noitagussO	Laborer,	Laborer,	Miner,	Miner, Driver,	Laborer,	Miner,	Driver,	Laborer,	Laborer,	Miner, Driver,	Shaker engineer, Miner,	Driver, Lahorer, Miner, Priver, Mar Balorer, Miner,
Nationality	Polish,	Polish,	Lithuanian,Polish,	Polish,	Polish,	Polish,	American,	Polish,	Polish,	Polish,	American, Polish,	Polish, Polish, Italian, Polish, Lithuanian, English,
Name of Person	Andrew Slackis,	Peter Leader,	Peter Bendrick,	John Androskie,	Charles Sapinskas,	Anthony Katitelas,	Charles Harker,	Charles Polaconis,	George Ambrolavige,	John Yanshitis,	Adam Shirey,	John Boleta, William Wolutski, Andrew Gerage, Anthony Plitney, August Broderick, William Hodge, Martin Kendrick,
Date of accident	July 7	t-	14 22	Aug. 8	24	Sept. 4	10	12	14	30 Oct. 2	2 9 13	13 14 12 22 22 Nov. 4 16

Polish,   Miner, 42   M. ( Park Place,   Schuylkill, [ Wounds on face and neck by premature	re, Polish, Miner, Miner, 60 M. North Mahanoy, Schuylkill, Foot and head injured by a fall of coal. Schuylkill, Back and ankle hurt by a prop falling on	S. Tunnel Ridge,
Schuylkill,	Schuylkill, Schuylkill,	Schuylkill, Schuylkill, Schuylkill, Schuylkill,
ark Place,	forth Mahanoy,	22 S. Tunnel Ridge, M. Suffolk, Tunnel Ridge, 22 S. Maple Hill,
A. F	ZZ	FRES
12 ] 3	9.9	22.48.02 20.14.02 0.88.00
iner,	iner,	Miner, Miner, Miner, Loader,
Polish,	Polish, M Irish,	Polish, Miner, Polish, Julianian, Miner, Polish, Miner, Miner, Air, Polish, Miner, Loader, Miner, Polish, Miner, Polish, Miner,
Dec. 2 Peter Stal,	George Lesavige,	William Wines, John Conosk, Charles Malefsky, Anthony Nowgen,
2	10	12 16 17 24
Dec.		

### FATAL ACCIDENTS

## By Falls of Coal, Slate and Roof

January 6. Bolest Veretsky, miner at Tunnel Ridge, was killed while preparing for a length of manway, by a piece of coal falling on him.

March 11. John Luto, miner at Ellangowan, leg and back broken by fall of coal. He had fired a blast at the face of the breast and had gone up and was dressing some loose coal, when it fell and caught him. He died on the way to the hospital.

April 10. Anthony Skummin, miner at Ellangowan, was instantly killed while working in face of breast by a fall of top rock.

June 6. Anthony Shedeski, miner at Suffolk, was killed by a fall of slate, while in the act of charging a hole. He should have timbered the place as directed by the boss.

July 1. Anthony Melutis, laborer at Boston Run, was working in the gangway when a piece of coal fell from the roof and killed him. The coal seemed to be solid a few minutes before the accident occurred.

July 14. Patrick Whalen, miner at Suffolk, was blasting bottom coal when a piece fell and drove him down pitch. He was found dead at the battery.

July 15. John Aranovich, miner at Maple Hill, was preparing to put up brattice when a piece of top coal fell on him, killing him.

August 25. Jack Hemsky, laborer at Mahanoy City, While drilling a hole, a piece of slate, on which he was standing, broke off and started the loose piece he was drilling in. The coal slid down the pitch onto Hemsky, killing him.

October 17. Joseph Ginder, laborer at Park Place, was killed by a fall of clod while working as a laborer in gangway.

October 20. Paul Resalusky miner at Tunnel Ridge. While shoveling coal in the chute, a piece of top coal fell on him and broke his leg. He died in the hospital.

November 4. William Romonofsky, miner at Primrose. Instantly killed by a fall of coal in a breast, while tamping a hole.

November 6. Joseph Skeakes, laborer at North Mahanoy. While taking down a piece of coal as instructed, it fell on him, injuring him. He died at State Hospital.

November 30. Anthony Shagalis, laborer at Mahanoy City. While putting down sheet iron in breast, coal fell on him and killed him.

## By Cars

January 17. Joe Lewonis, loader at Primrose. Caught on trip of cars that was being pulled to counter chute. He jumped off on low

side of gangway and was caught between car and rock. Died from his injuries.

June 5. Peter Pieski, doorboy at Maple Hill, was caught between car and door. He closed the door before the last car was through. He was injured on the head and died.

June 11. Joe Cheronis, loader at Maple Hill. Killed by locomotive. Engineer got off and turned switch. The engine started on backward motion and jammed Cheronis between rib and cars.

December 12. William McCabe, driver at Boston Run. In turning his mule he got caught between mule and car and was internally injured. He died at his home the same evening.

December 23. Joe Puscavage, driver at Maple Hill. He fell under his trip of cars while coming out of the mine and was fatally injured.

## By Explosions

February 25. Mike Mitsko, miner at Mahanoy City, was in the act of putting on length of brattice when a fall of coal brushed down the gas on his naked light, and caused an explosion. He died at the hospital. He had been strictly forbidden to work with anything but safety lamp.

May 12. John Dudlick, laborer at Ellangowan. He went up the chute and fired the gas, burning his face and hands. He was working with a safety lamp, but must have tampered with it.

## By Falling Down Shafts, Slopes, Etc.

June 17. William Carlunas, laborer at Park Place. Killed while attempting to descend slope after working hours, without notifying engine man.

November 7. Jacob Opelia, miner at Boston Run. Killed by falling down slope. He and eight others were hoisted to the surface on west side of slope. After walking a short distance away from the slope he returned and fell down the opening on the east side.

## By Suffocation

February 14. Joseph Bolensky, miner at Mahanoy City. He was barring down coal when he fell and the coal rolled on him. He was fatally injured.

### Miscellaneous.

July 22. Alexander Lynch, Mike Yancofski, Matt Shevinski. While working in the west top split No. 2 west gangway, shaft level,

the water broke in to breast No. 15 from an old abandoned working of the Knickerbocker Colliery. The three men were drowned.

July 22. Peter Kleckner, miner at Ellangowan, was drowned while working in west top split No. 2 gangway, No. 15 breast. I did not know nor did those in charge of the colliery know anything of the accumulation of water, as the map did not show that portion of the abandoned workings.

August 21. Peter Sneck, locomotive engineer at Knickerbocker. While the engine was going through a door at mouth of drift, the door attendant in some way let the door swing half shut and Sneck was crushed between engine and door.

October 21. Frank Karish, laborer at Knickerbocker, was killed by being crushed between rib and prop while in the act of lifting prop.

December 16. Joseph Metules, miner at Saint Nicholas. His finger was smashed while holding a jumper for his partner to strike on. He was struck on the finger and died of lockjaw at the State Hospital.

## CONDITION OF COLLIERIES PHILADELPHIA AND READING COAL AND IRON COMPANY

## Maple Hill Colliery

This is one of the most modern and the largest coal producing collieries operated by this company. They are at the present time sinking a No. 2 shaft, size 12 feet 8 inches by 31 feet in the clear. Outside dimensions 15 feet 2 inches by 33 feet 6 inches. This shaft contains six compartments, two for coal and four for water. It is timbered with 12x12 inch southern yellow pine, and is lagged with 3 inch southern yellow pine plank back of timber. The depth of the shaft is to be 1,050 feet reaching the Buck Mountain Basin.

It is ventilated with a 15 foot fan while in sinking operation. A carpenter and blacksmith shop 32x76 feet has recently been completed outside. The breaker has been remodeled. They have taken out all the circular screens and replaced them with shakers. They also have taken out all the old jigs and have replaced them with the latest improved jigs. The ventilation, drainage and road beds of this mine are in good condition.

We expect very good ventilation at this colliery after the 21 foot fan which was recently erected, has been connected.

## Suffolk Colliery

They have done much at this colliery to improve the ventilation. In connection with one fan, an opening was driven through solid rock a distance of 153 feet 11x12 feet or 122 feet area. Seventy-five

feet below the surface in this opening, a brick arch was built 100 feet area on a pitch of 35 degrees and continued all the way up. Over this a 21 foot fan was erected which will ventilate the South Tunnel workings of the Maple Hill Colliery. To increase the volume of air the main airways have been enlarged at different points conceting with the Mammoth Top Split fan. At different parts of the mines, crosscuts have been driven through slate and rock, connecting the different splits with the main airway.

The ventilation, drainage and road beds of this colliery are in good condition.

## Saint Nicholas Colliery

This colliery is very important. Both inside and outside workings are equipped with the latest mining inventions, and from present indications will in the near future be one of the largest producers of this company.

An airway was driven in the Mammoth seam from the third level to the surface 100 feet in area over which a 21 foot force fan has been erected.

An air tunnel has been driven from middle split south dip to bottom split north dip on the third level, and another from the bottom split to the top split south dip at third level.

A third tunnel has been driven from east middle split to bottom split east of hoisting slope.

The main hoisting slope has been extended from second to third level and gunboats used in the place of cages.

In the second level a pump house has been driven in the solid rock, size 16x21x50 feet in which a pump 12x48 inches has been placed. Another pump house was driven in third devel in the same manner. A pump was also placed in it, size 18x48 inches. One steam and one column way was driven from third to second level to supply the pump on the lower level.

The road beds are exceptionally good. The ventilation and drainage are also in good condition.

## Boston Run Colliery

Outside—They have constructed two tubular boilers, size 6x18 feet, built a lamp house and inside foreman's office combined 26x15x8 feet, and a wash house, size 24x24x9 feet. They have also laid an engine foundation for the little Buck Mountain slope 26x60 feet.

Inside—A tunnel was driven from Holmes to Primrose second level, length 110 feet. Another was driven from bottom split of Mammoth to Skidmore second level, length 45 feet. A third tunnel was driven from Buck Mountain to Little Buck Mountain third level,

length 60 feet. They have driven an air tunnel from Little Buck Mountain to Buck mountain water level, main airway, length 36 feet. They have sunk the Little Buck Mountain Gunboat slope to a depth of 950 feet from surface, but it is not yet completed. They have driven two air tunnels from Seven-foot to Skidmore, second level, 6x6 feet, length 40 feet through slate and rock.

An airway 10x10 feet has been driven in the Buck Mountain vein from the surface to the second level to act as an out-let for Saint Nicholas Colliery, length 450 feet. It is partly finished. The ventilation, drainage and road beds are in good condition.

## Tunnel Ridge Colliery

This is another important colliery. An underground single track slope is being sunk in the Skidmore vein, south dip, but it is not yet completed. A tunnel from the Seven Foot to the Skidmore vein forming a landing at the top of this underground slope 60 feet in length has been driven. A new pump house was driven in the solid rock and a 12x48 inch pump was placed in it.

Outside—Two new tubular boilers 6x18 feet have been erected. One bore hole to the depth of 519 feet with six inch casing where ropes shall be placed for the purpose of hoisting from the underground slope. An engine house has been placed at the bore hole with an engine 18x48 inches.

Ventilation, drainage and road beds of this colliery are in good order.

## North Mahanoy Colliery

Outside—They have erected a new engine house where a pair of new engines 30x60 inches were placed, doing away with a smaller pair which only hoisted four cars per trip, while the new ones will hoist six cars per trip.

Inside—A tunnel was driven from the bottom split to the top split mammoth vein, in the Ellangowan basin, length 332 feet and struck a vein 19 feet in the thickness of good coal.

Ventilation, drainage and etc., are in good order.

## Knickerbocker Colliery

In the Buck Mountain seam, they have just completed the first level of an underground slope. This slope is driven across the pitch a distance of 650 feet. They have driven an airway parallel with this slope, and they are now driving a tunnel on this level from the Buck Mountain to the bottom split of the Mammoth vein. This tun-

nel will cut the Seven Foot and Skidmore. They have also driven a tunnel from the bottom split to the top split of the Mammoth vein. Ventilation, drainage and road beds are in good condition.

### Mahanoy City Colliery

Outside—Two bore holes 550 feet each in depth with four and five inch easing in which ropes will be placed for the purpose of hoisting from an underground shaft. The foundations for the engines are nearly completed.

Inside—A rock plane has been driven from second level, Holmes vein, through rock a distance of 255 feet, cutting the Primrose vein. A new underground shaft is being sunk to the basin of the Buck Mountain vein. By means of this shaft they will be able to mine coal below their present levels.

The ventilation, drainage and road beds are in good order.

### Ellangowan Colliery

There has been erected at the bottom of the shaft a pump house in rock between the bottom and middle veins, 95x25x16 feet in which are placed two coal and iron pumps 18x48 inches. Shaft level tunnel driven from Seven Foot, cutting the Skidmore vein. Double track turnout in rock at top of No. 2 slope, 18 feet wide and 224 feet long.

One air locomotive hauling coal from top of slope to bottom of shaft. A five inch air line from compressor house on surface to west end of shaft level turnout and from shaft level to fifth level. A tunnel driven in fifth level from Buck Mountain, cutting Seven Foot and Skidmore veins. A tunnel in fifth level east, cutting the Skidmore vein. One air locomotive hauling the coal from the turnouts in the different veins to the bottom of the slope.

Ventilation, drainage and read beds in this Colliery are in good condition.

### LEHIGH VALLEY COAL COMPANY

### Primrose Colliery

A tunnel 200 feet in length was driven northward on the water level from ten foot or bottom split of mammoth to the seven foot. A tunnel 240 feet long was driven from east ten foot water level gangway to connect the basin slope. An eight inch rope hole was put down 117 feet from the surface to east plane level basin slope in the mammoth vein for the more economical operation of the spoon end of the basin. To do this work a pair of 12x20 foot engines were placed on the surface in a 30x25 foot frame building.

A new pump house 12x20x60 feet was constructed at a location

120 feet east of main hoisting slope. A new dam was constructed on the surface for the purpose of taking care of the discharged pump water or water pumped. A combination blacksmith, carpenter and machine shop was erected, frame 55 feet square.

Ventilation, drainage, etc., are in good order.

### CRYSTAL RUN COAL COMPANY

### **Broad Mountain Colliery**

They have started a new level in the Buck Mountain vein below the present level. This new level was opened on No. 3 slope, and this slope was sunk a number of years ago and had been filled with water. We pumped the water out of said slope to a depth of 350 feet, and at a distance of 325 feet started the said new level. We struck a splendid Buck Mountain vein eleven feet in thickness. They propose to pump the remainder of the water out the slope as there still remains a depth of 250 feet to the basin. Outside they have erected three tubular boilers of a high grade.

The ventilation, drainage, etc., are in good condition.

### SILVER BROOK COAL COMPANY

### Silver Brook Colliery

At a distance of 1,660 feet from the slope a subterranean slope has been sunk to the bottom of the basin a distance of 250 feet, with an average of 48 degrees pitch. Struck coal eight feet thick at bottom of basin, good quality. An airway west of the workings has been driven to the surface, a distance of 275 feet on an average pitch of 30 degrees.

The ventilation is fair, drainage and road beds not so good.

### LENTZ AND COMPANY

### Park Place Colliery .

Outside of the ventilation being greatly improved, there is nothing worth mentioning, as the other improvements are very few and small.

The ventilation, drainage and roads are in good condition.

### Mine Foremen's Examinations

Examinations of candidates for mine foremen and assistant mine foremen were held May 12 and August 8. The following applicants were successful and received certificates of qualification.

### Mine Foremen

Gwyllm Jones, Shenandoah; Joseph F. Long, Silver Brook: Wil-

liam Lamuels, Mahanoy City; Michael McNelis, Mahanoy City; Patrick J. Moore, Mahanoy City; Thomas Bray, Mahanoy City; John Kericher, St. Nicholas; Evan Thomas, Frackville.

### Assistant Mine Foremen

William Evans, Shenandoah; John Dietrick, Shenandoah; John Twait, Shenandoah; Thomas Manion, Shenandoah; James Herrington, Shenandoah; William McLaren, St. Nicholas; John Wentz, St. Nicholas; John Coughlin, Mahanoy City; Bartle Trainor, Mahanoy City; Michael Scanlan, Mahanoy City; Henry Fry, Shenandoah; Benjamin Motz, Shenandoah; Thomas R. Powell, St. Nicholas; Thomas Moore, Mahanov City; John Braithwaite, St. Nicholas; William Southall, St. Nicholas; George Witchey, Mahanoy City; Grifith T. Powell, St. Nicholas; John Friel, Mahanoy City; John Gurtitus, St. Nicholas; Jacob Webb, Mahanoy City; Thomas J. Davis, Branondville; James Foley, Gilberton; Charles McKerns, St. Nicholas; George Campbell, Mahanoy City; Charles Terrill, St. Nicholas; John Perry, Mahanoy City; John Southall, Mahanoy City; James Halloway, Mahanoy City; Robert Williams, Mahanoy City; George Carmitchel, Mahanoy City; Thomas H. Hales, St. Nicholas; David Miles, St. Nicholas; John Cody, Mahanoy City; William Glover, Park Place; Alexander Bradley, Park Place; Harry Hales, Mahanov City; William Anderson, Mahanov City; Owen Jones, Mahanov City; Philip Schlimmer, Mahanoy City; James Kennedy, St. Nicholas; William Cone, Mahanoy City; Lewis J. Benedict, Mahanoy City; John Higgins, St. Nicholas.



## Twelfth Anthracite District

SCHUYLKILL COUNTY

Pottsville, Pa., March 1, 1904.

Hon. James E. Roderick, Chief of Department of Mines:

Sir: I have the honor to transmit herewith my report as Inspector of Mines for the Twelfth Anthracite District, for the year ending December 31, 1903.

It contains the usual statistics in tabulated form. The total production of coal was 3,498,306. There were 7,923 persons employed. To produce this quantity of coal 55,817 kegs of powder and 445,055 pounds of dynamite were used. The number of fatal accidents was 33; the number of non-fatal 88.

Respectfully submitted,
MICHAEL J. BRENNAN,
Inspector.

### Twelfth Anthracite District, 1903

### SUMMARY OF STATISTICS

Number of mines in district,	21
Number of mines in operation,	21
Number of tons of coal produced,	3,498,306
Number of tons shipped to market,	3,013,224
Number of tons sold at mines to local trade,	30,567
Number of tons consumed at mines in generating steam	
and heat,	447,015
Number of persons employed inside the mines,	4,845
Number of persons employed outside,	3,078
Number of fatal accidents inside the mines,	28
Number of tons produced for each fatal accident inside,	124,939
Number of persons employed per fatal accident inside,	173
Number fatal accidents outside,	5
Number of persons employed per fatal accident outside,	616
Number of wives made widows by fatal accidents,	22
Number of children orphaned by fatal accidents,	50
Number of non-fatal accidents inside of mines,	73,
Number of persons employed per non-fatal accident in-	
side,	66
Number of non-fatal accidents outside,	15
Number of persons employed per non-fatal accident	
outside,	205
Number of electric motors used inside,	5
Number of fans used for ventilation,	38
Number of gaseous mines in operation,	16
Number of non-gaseous mines in operation,	5

### TABLE A.—Twelfth Anthracite District, 1903

### PRODUCTION OF COAL

Names of Companies	Tons
Philadelphia and Reading Coal and Iron Company,	1,818,592
Leisenring and Company,	158,339
Pine Hill Coal Company,	184,483
Buck Run Coal Company,	184,518
Darkwater Coal Company,	$-21,\!320$
Lytle Coal Company,	224,775
St. Clair Coal Company,	469,789
Silverton Coal Company,	$60,\!454$
East Ridge Coal Company,	$112,\!645$
Davis Brothers,	$46,\!457$
E. C. White and Company,	40,654
Mt. Hope Coal Company,	$54,\!800$
Losch, Snyder and Company,	21,514
Black Diamond Anthracite Coal Company,	9,000
Stoddart Coal Company,	90,966
Total,	3,498,306
Production by Counties	
Schuylkill,	3,498,306

TABLE B.—Twelfth Anthracite District, 1903

d per	əbis	Number of employes out	180 168 52	205
mploye	əpis	Number of employes out	1,623	616
ıber eı	əpisi	Number of employes in periodent	85 4 4 8 10 4 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8	99
1; nun	əbisi	Number of employes in	215 3.0 8.8 8.3 137 344 66	173
ployed	s	Total number of employe	4,421 416 317 315 515 578 604 234 233	7,923
ns em	əpis	Number of employes out	1,623 117 133 99 99 95 168 260 102 149	3,078
perso	əpi	Number of employes insi	98 98 98 98 98 98 98 98 98 98 98 98 98 9	4,845
mber of	per per	Tons of coal produced figures of the first	50,516 30,747 30,747 30,753 58,724 60,454 112,645	47,922
lent; nu	Teq	Tons of ceal produced significant inside	133, 892 26, 399 61, 494 74, 625 469, 779 50, 227	124,939
r acció	idents	TstoT	26 - 66 - 10 - 10 - 10 - 10 - 10 - 10 - 1	888
ced per accident	Non-Fatal Accidents	-abistnO	σ	15
produc	Non-Fa	9hizuI	\$P-00 00-H	13
coal	lents	IstoT	4.000010100H01	33
ons of	Fatal Accidents	obistuO	H 0121	i.à
er of t	Fata	əbisnī	က္ယာက က်ေးကလေး	28
Fatal and non-fatal accidents; number of tons of coal produced per accident; number of persons employed; number employed per		Names of Companies	Philadelphia and Reading Coal and Iron Co Leisenring and Co., Brishill Co Buck Run Coal Co. Darkwater Coal Co. Lytle Coal Co. St. Clar Coal Co. St. Clar Coal Co. Extern Coal Co. Bast Ridge Coal Co.	Totals and averages for district,

TABLE C.—Twelfth Anthracite District, 1903 Classification of Fatal Accidents

		Islot buatb	rorestancement err	33
		Spirate Intol'	FF 21	l ss
Outside of Mines		Miscellaneous causes		0.1
		By boiler explosions		
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Out		13у тасыйнегу		01
		Ily cars	-	-
		Total inside	च्याच्या ६३ च्या ६० ६० ६० ल्ला ला ००	80
		Miscellaneous causes		-
		Suffocated by coal, etc.		
		By mules		:
		Crushed at batteries		
	By Falling Into	Manways, breasts, etc.		-
les		sadols		-
Inside of Mines	By F	Shafts		1
nside		By blasts, etc.		
н		Powder and dynamite	60	co
		Smothered by gas		
		By explosion of gas		
		By mine cars		01
	ls of	100A		×
	By Falls of			
		· Iso')		:
			January, Pedruary, March, March, May June June July August, Scheder, October, October, Decomber,	Totals,
			ary. h, st mber. mber. mber.	Totals
			Janu, Febru Marel Aprill, May. July. July. Septes Septes Octob	,

TABLE D—Twelfth Anthracite District, 1903 Classification of Non-Fatal Accidents

		Grand total	88 739900777
		[etot baca?)	<u> 4 на на за на</u>
		Total outside	::!
nes		Miscellaneous causes	HENTHER E
of Mines		Ey boiler explosions	c1 c1
Outside of		By suffocation	
Out		Бу тасыіпету	7 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
		By cars	2
		Potal Inside	<u></u> <u> </u>
		Miscellaneous causes	HH 61H 61 H ∞
		Suffecated by coal, etc.	
		By mules	
		Crushed at batteries	1
	By Falling Into	Manways, breasts, etc.	H 03
va .		Slopes	
Inside of Mines		syleds	
side of		By blasts, etc.	1 22 1107 5
Ins		Powder and dynamite	4 61 0
		Smothered by gas	
		By explosion of gas	11 00 4
		By mine cars	H 0 4 H 4 0 0 0
	of	Roof	
	By Falls of		HH H WH F-
	By	Coal	400000000000000000000000000000000000000
			January, February, March, April, April, Juna, July August, Schrember, October, Docember, Totals,

Occupations of Persons Killed or Fatally Injured Inside and Outside the Mines TABLE E.—Twelfth Anthracite District, 1903

	Grand total	でで6746865日日 日で 88
	Total outside	HH
	All other employes	
	Book-keepers and clerks	
	Slate pickers (men)	
Outside	Slate pickers (boys)	
0	nemerh bas ereenigad	
	Blackemiths and carpenters	
	nemerol ebistuO	
	Superintendents	
	Potal Inside	440148000H H8
	All other employes	- 1
	Company men	1 1 2
	uəmqmu.	
	Door-boys and helpers	
Inside	Drivers and runners	21 62
Ä	Miners' laborers	
	Miners	401444014 00 S
	Fire bosses and assistants	-
	Assistant mine foremen	
	Mine foremen	
		January.  January.  March.  March.  May.  Abril.  Abus.  Jours.  Jours.  October.  November.  December.  Totals.

TABLE F.—Twelfth Anthracite District, 1903 Occupations of Persons Injured Inside and Outside the Mines

	Grand total	88 9 77 4 4 4 0 1 1 7 7 7 7 9 8 8 8
	shishuo IstoT	4-01-01-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-
	Ali other employes	
	Book-keeners and clerks	
0	Slate pickers (men)	
Outside	Slate pickers (boys)	
	Engineers and firemen	8 H H H
	Blacksmiths and carpenters	
	nement of spirito	
	syneprintendents	
	əbizni İstoT	<b>ಀ</b> ೲಀಀೲೲಀಀಀಀಀ
	All other employes	
	Сопірапу теп	ਜਜਜ : 01 : ਜ :   ©
	Гитртеп	
0	Door-boys and helpers	H
Inside	Drivers and runners	H 81 HHNH N 0
	Miners' laborers	Ø1-1 - 4
	Miners	F-001-01-01-4-0-10 [1-
	Fire bosses and assistants	H H M
	Assistant mine foremen	
	Mine foremen	
		January. February March, April, May, June, July August, Seltember, December, December,

### TABLE G.—Twelfth Anthracite District, 1903

Nationality of Persons Killed or Fatally Injured Inside and Outside the Mines

	American	Welsh	Irish	German	Polish	Italian	Slavonian	Lithuanian	Totals
January, February	4					1			5
March, April,	1 2					<u>1</u>	1	1	4
May, June, July	2 2								3
August, September,	1				1				1
October, November,	1 3								1
Totals,	17	1	1	2	2	2	6	2	3

TABLE H.—Twelfth Anthracite District, 1903

Nationality of Persons Injured Inside and Outside the Mines

		_			-			-			
	American	English	Welsh	Irish	German	Polish	Hungarian	Slavonian	Lithuanian	Austrian	Totals
January, February, March	6 2 9	2	2	2 1	1	1	1	1 1 3			13 6 15
April,	2 2 4			1			1	2	1	1	4 4 10
July, August, September, October,	2 2 3			1 1		1		1			5 5 9
November, December, Totals,	3 6 		 				<u>-</u>	······	1 ,	· ·	3 7

# TABLE I.—Twelfth Anthracite District, 1903

Operators and mines, kind of openings, type and size of fans, size of furnaces, volume of air produced by fan or furnace per minute, number of splits of air currents, number of persons employed inside, and quantity of air produced for each employe per minute

11	
Average number of cubic feet porty of up to the provided to to the provided to the test of	436 180 180 482 482 483 888 888 888 582 500
Number of persons employed inside	230 230 240 440 231 231 217 217 217 217 40
Number of cubic feet per minute passing out at out- let	14,000 10,700 1126,890 1126,890 1126,890 10,000 20,194 20,000
Total quantity of air per Ils ni guilathae eirculathae in cubic feet the splits in cubic feet	15, 238 69, 389 111, 98, 387 1111, 987 111, 209 110, 209 46, 437 21, 682 20, 600
Number of cubic feet of air per minute entering the mine at inlet	15, 258 62, 388 62, 388 1115, 587 111, 587 110, 200 40, 750 46, 437 12, 682 110, 200 46, 400 110, 200 46, 400 110, 200 110, 200
Number of splits of air cur- rents	22200000000 - 0 10 10 10 10 11
Power used	Steam, St
Vame of fan	Gulbal. Gulbal. Gulbal. Gulbal. Gulbal. Gulbal. Gulbal. Gulbal. Gulbal. Gulbal. Gulbal. Gulbal. Gulbal. Gulbal.
ni-beqoleveb eauge developed-in	20111111 111011100 H 0
Number of revolutions per	7.000 88.88 8.89 8.80 8.80 8.80 8.80 8.80
Depth of blades in feet	10 10 00 10 10 10 10 10 10 10 10 10 10 1
Width of blades in feet	0 0 p p 0 4 0 0 10 0 4 0 10 10 10 0 10 10 4 p p p 20 10 10 10 10 10 10 10 10 10 10 10 10 10
Diameter of fan in feet	22228228228228282828282
Method of ventilation	Fan. Fan. Fan. Fan. Fan. Fan. Fan. Fan.
Caseous or non-gaseous	Non-gas. Non-gas. Gaseous. Gas
Mind of opening	Shope. Shope. Shope. Shope. Shope. Shope. Shope. Shope. Shope. Shope. Shope. Shope. Shope. Shope. Shope. Shope. Shope. Shope. Shope. Shope.
Names of Operators and Mines	Philadelphia and Reading Coal and West Brookside No. 1, West Brookside No. 4, East Brookside No. 4, East Brookside No. 4, Lincoln No. 1, Lincoln No. 1, Lincoln No. 1, Lincoln No. 1, Lincoln No. 1, Lincoln No. 2, Lincoln No. 2, Lincoln No. 3, Lincoln No. 3, Lincoln No. 3, Good Spring No. 1, Good Spring No. 3, Good Spring No. 3, Good Spring No. 3, Louis Nest., No. 3, Louis Nest., No. 3, Louis Nest., No. 3, Louis Nest., No. 3, Louis Nest., No. 3, Louis Nest., No. 3, Louis Nest., Landower, Taylorsville, Glendower, Taylorsville, Glendower, Glendower, Glendower, Glendower, Glendower, Glendower, Wadesville, Wadesville, Pine Knot sinking,

635	83.8	449		461	27.5	968	518		450	215		
175	174		62	128	319	85	54	65	41	40		52
111,140	58,285	43,800		61.806	56,980	75, 100	40,000		25,300	13,000		
111,130	58,983	39,160		59,113	47,9/3	0.a	2>,000		1 1	12,500		
111,130	58,983			59,113	39.	1-	25,000			12,500		
10	0	4		10			4		67	01	:	
Steam,.]	Steam, Steam,	Steam,.	Steam,.]	Steam,.]	Steam,	Steam,	Steam,		Steam,	Steam,		
Guibal,	Guibal, Guibal, Guibal,	Guibal, Guibal,	Guibal,	Guibal,	Guibal, Guibal, Guibal,	Guibal, Guibal, Guibal,	Guibal		Guibal,	Plumdel & Gould.		
ei –	HØ	9.9.	: :	1.8	11/2	1.5	.75		rō		:	
58	63	96		96 108	0.00	95 80 80		:	110	80		:
3-8	3-8-6	4.0		6-2	9-09-09-09	S-744	3-4	:	4-2	3-4		
8-11/2	9	3.9		412	101010	2-1 4-9 4-9	4		3-4	3-4	:	
22.81	20	225	: :	828	14 44	8 16	12		21	10		
Fan,	Fan, Fan,	Fan,	Natural, Natural,	Fan,	Fan, Fan, Fan,	Fan, Fan,	Fan,	Natural,	Fan,	Fan,	Natural,	Natural,
Gaseous, Gaseous,	Gaseous, Gaseous, Gaseous,	Gaseous,	Non-gas. Non-gas.	Non-gas. Non-gas.	Gaseous, Non-gas. Non-gas.	Non-gas. Non-gas. Non-gas.	Non-gas.	Non-gas.	Gaseous,	Non-gas.	Non-gas.	Gaseous,
Shaft,	Shaft, Slope Drift,	Slope,	Slope	Shaft,	Slope, Drift, Shait,	Slape,	Slope,	2 Slopes,.	Slope,	Slope,	Slope,	Slore,
Oak Hill.	Pine Hill Coal Co. Pine Hill collery. Pine Hill collery.	Buck Run, Buck Run,	Boberts, Bob	Lytle colliery, Lytle colliery,	St. Clair colliery. St. Clair colliery. St. Clair colliery.	Silverton collery. Silverton colliery. Silverton colliery.	East Ridge coal Co.	Davis Brothers Ellsworth colliery,	E. C. White and Co. Howard colliery,	Mt. Hope colliery.	Lorberry colliery,	Black Diamond Anthracite Coal

Operators, Location of Collieries, Railroads, Etc. TABLE 1.-Twelfth Anthracite District, 1903

Railroad to Mine	Philadelphia and Reading Philadelphia and Reading Philadelphia and Reading Philadelphia and Reading Philadelphia and Reading Philadelphia and Reading Philadelphia and Reading Philadelphia and Reading Philadelphia and Reading Philadelphia and Reading Philadelphia and Reading Philadelphia and Reading Philadelphia and Reading Philadelphia and Reading Philadelphia and Reading Philadelphia and Reading Philadelphia and Reading Philadelphia and Reading	Philadelphia and Reading	Pennsylvania Pennsylvania	Philadelphia and Reading	Pennsylvani <b>a</b> Pennsylvani <b>a</b>	Pennsylvania	Philadelphia and Reading Philadelphia and Reading	Philadelphia and Reading	Philadelphia and Reading
P. O. Address	Pottsville, Pottsville, Pottsville, Pottsville, Pottsville, Pottsville, Pottsville, Pottsville, Pottsville, Pottsville, Pottsville, Pottsville, Pottsville, Pottsville, Pottsville,	Minersville,	Minersville,	Minersville,	Minersville,	Minersville,	Pottsville,	Llewellyn,	
Name of Super- intendent	John Veith, John Veith, John Veith, John Veith, John Veith, John Veith, John Veith, John Veith, John Veith, John Veith, John Veith, John Veith,	William Schwenk,	Richard J. Wren,	W. R. Wilson,	W. R. Wilson,	Arthur Kennedy, .	W. T. Smyth,	T. R. Bowen,	
P. O. Address	Pottsville, Pottsville, Pottsville, Pottsville, Pottsville, Pottsville, Pottsville, Pottsville, Pottsville, Pottsville, Pottsville, Pottsville,	Minersville,						Llewellyn,	Minersville,
Name of General Superintendent	Wm. J. Richards, Wm. J. Richards, Wm. J. Richards, Wm. J. Richards, Wm. J. Richards, Wm. J. Richards, Wm. J. Richards, Wm. J. Richards, Wm. J. Richards, Wm. J. Richards, Wm. J. Richards, Wm. J. Richards, Wm. J. Richards, Wm. J. Richards, Wm. J. Richards,	William Schwenk,						T. R. Bowen,	B. E. Kingsley,
County	Schuykill Schuykill Schuykill Schuykill Schuykill Schuykill Schuykill Schuykill Schuykill Schuykill Schuykill Schuykill	Schuylkill,	Schuylkill,	Schuylkill,	Schuylkill,	Schuylkill,	Schuylkill,	Schuylkill,	Schuylkill,
Names of Operators and Col- lieries	Philadelphia and Reading Coal West Brookside colliery, Gunon colliery, Good Spring colliery, Otto colliery, Phoenix Park No. 3 colliery, Vadesville colliery, Falmia washery, Kalmia washery, Anchor washery,	Leisenring and Co.	Pine Hill Coal Co. Pine Hill colliery,	Buck Run Coal Co.	Darkwater Coal Co. Roberts colliery, Roberts washery,	Lytle Coal Co.	St. Clair Coal Co. St. Clair colliery,	Silverton Coal Co.	East Ridge Coal Co.

Philadelphia and Reading	Philadelphia and Reading	Philadelphia and Reading	Schuylkill, J. B. Ditzler, Pinegrove,		Philadelphia and Reading	Philadelphia and Reading
			Pinegrove,			D. H. McGee, Minersville,
			J. B. Ditzler,			P. H. McGee,
St. Clair,	Pottsville,	Pottsville,			Pottsville,	
Schuylkill John H. Davis, St. Clair,	Schuylkill, Richard White, Pottsville,	Schuylkill, S. D. Kynor, Pottsville,			Schuylkill, F. P. Christian, Pottsville,	Sebuylkill,
Schuylkill,	Schuylkill,	Schuylkill,	Schuylkill,		Schuylkill,	Sebuylkill,
Davis Brothers Ellsworth colliery,	E. C. White and Co. Howard colliery.	Mt. Hope Coal Co.	Losch, Snyder and Co. Lorberry colliery,	Black Diamond Anthracite Coal	Black Diamond,	Wolf Creek washery,

TABLE 2.-Twelfth Anthracite District, 1903

Number of tons of coal mined in each colliery, number of days worked, number of persons employed, number killed and injured,

Number of horses and mules	105 105 105 48 71 71 69 7	497	27
	214 503 603 5520 600 600	2554 79 49	26
Number of pounds of dynamite	65, 903 12, 214 12, 214 30, 603 29, 416 30, 526 18, 545 34, 969 17, 600	25 54 79 79 239,849	15,950
Number of kegs of powder used	4, 733 5, 753 5, 753 5, 753 3, 94 1, 105 611 3, 044 75	28,086	3,651
Number of non-fatal accidents		104	7
Number of fatal accidents	क्ष्मक्ष्यम् । व	141	9
Number of employes	1,169 853 497 561 561 557 507 76	32 9 9 44 44 421	416
Number of days worked	+422468888888888888888888888888888888888	132	256
rotal production of coal in tons	395,784 357,505 224,017 237,205 151,322 151,323 17,058	73, 097 564 39, 902 113, 563 1,818, 592	158,339
Number of tons sold to local trade and used by employes	6,588 1,326 1,326 1,046 2,046 4,551 1,19	17,882	3,089
Number of tons used for steam and heat at collieries	50,403 23,781 16,046 37,182 15,882 15,882 53,576 5,945 5,945	4, 018 275 3, 660 7, 953 218, 273	16,000
Number of tons of coal shipped by rall or otherwise	245-381 227,136 204,757 198,677 110,744 111,484 11,094 11,476,827	69,079 289 36,242 105,610 1,582,437	139,250
County	Schuylkiii Schuylkiii Schuylkiii Schuylkiii Schuylkiii Schuylkiii Schuylkiii Schuylkiii Schuylkiii	Schuylkill, Schuylkill, Schuylkill,	Schuylkill,
Names of Operators and Collieries	Philadelphia and Reading Coal and Iron Co. West Brookside, Lincoln, Lodod Spring, Otto, Phoenix Park No. 3, Glendows, Wadesville, Pine Knot,	Kaimia washery, Middle Creek washery, Anchor washery,	und Co,

\*No time reported by operators †Totals in this column are averages.

27,000 20	27,000 21	24,931 29	1,557 14	67, 667 75	9,148 44	9,148 44	26, 567 29	6.186 16	6,000 11	200 7	11,700 14	Son 6	7,200 6	83	445 075 C14
4,590	590	2, 499	30	1,509	8, 794	8,794	1 2	1.487		250	4,100	140	10		20 213
ري د	3 6	21	61	3	1 I3	1 100	21								33 60
382	397	318	157	578	604	614	27	21	109	35	151	9	68.	40	660 2
538	238	260	105	2.16	26.5	8, 61	50	218	\$ 1 S	27.5	187	197	300		
189,042	184, 483	181,518	21,320	224,775	369,515 100,274	469,719	60, 454	112,645	46,457	40,654	54, 800	21,514	9,600	50, 966	2006 2006
836	837	365	28	1,926	1,691	1,709	209	1.6	361	258	2,464	480		863	200 867
10,950	10,950	18,250	4,590	68,450	70,76)	70,760	13,146	7,100	2,950	5,000		1,850	1,500	3.202	A47 015
168, 256	172,6.6	165, 903	16, 702	154, 399	207,064		47, 105	105,448	43,117	35,396	47,336	19,184	+7,510	86,901	8 090 Tea
Schuylkill,		Schuylkill,	Schuylkill,	Schuylkill,	Schuylkill,		Sehuylkill	Sehuyikill,	Schuylkill,	Schuylkill,	Sehuylkill,	Sehuylkill,	Schuylkill,	Schuylkill,	
Pine Hill Coal Co. Pine Hill colliery. Pine Hill washery,	Totals,	Buck Run, Buck Run Coal Co.	Roberts colliery Treats Coal Co.	Lytle colliery,	St. Clair colliery, St. Clair washery,	Totals,	Silverton colliery,	East Ridge colliery,	Davis Brothers Ellsworth colliery,	E. C. White and Co.	Mt. Hope Colliery,	Lorberry washery,	Black Diamond Anthracite Coal Co.	Wolf Creek washery,	Grand totals

 $\pm Employes$  included with the St. Clair colliery  $\pm 7,500$  tons stored

## TABLE 2-Recapitulation

Number of horses and mules	64 24 24 24 24 24 24 24 24 24 24 24 24 24	814
Number of pounds of dynamite	239,849 15,950 27,000 24,931 1,557 6,767 6,148 6,040 1,700 1,700 7,200	445,055
Number of kegs of powder used	28, 086 3, 651 3, 651 2, 4, 590 1, 809 8, 794 1, 735 1, 73	55,817
Number of non-fatal accidents	12. C 0 0 0 C C I I I	88
Number of fatal accidents	# © 50 50 50 50 50 50 50 50 50 50 50 50 50	33
Number of employes	4,421 6416 718 718 718 718 728 728 728 728 738 708 708 708 708 708 708 708 708 708 70	7,923
Number of days worked (Not including washeries)	271 271 271 271 271 271 271 271 271 271	231
snot ni faos to noitenborq fatoT	1,818,552 155,339 184,453 184,453 18,4518 21,250 40,454 46,457 46,457 46,457 9,000 90,966	3,498,306
Number of tons sold to local trade and used by employes	3,0892 3,0892 3,374 3,675 1,1926 1,1926 1,1926 3,607 2,268 2,268 4,64 4,64 4,64 4,64 4,64 4,64 4,64 4,	30,567
Number of tons used for steam and heat at collieries	218. 273 16. 600 18. 250 18. 250 18. 250 68. 450 70. 4	447,015
Number of tons of coal shipped	1,582,487 1,582,487 1,692,500 1,672,903 1,574,899 1,574,	3,020,724
County	Schuylkill, Schuylkill, Schuylkill, Schuylkill, Schuylkill, Schuylkill, Schuylkill, Schuylkill, Schuylkill, Schuylkill, Schuylkill, Schuylkill, Schuylkill, Schuylkill, Schuylkill, Schuylkill,	
Names of Operators and Collieries	Philadelphia and Reading Coal and Iron Co., Leisenring and Co., Pine Hill Coal Co., Buck Run Coal Co., Lytle Coal Co., Lytle Coal Co., Lytle Coal Co., Silverion Coal Co., Silverion Coal Co., Silverion Coal Co., Bax Flagge Coal Co., Bax Ruthes. Ext. White and Co., Mr. Hope Coal Co., Loseh, Snyder and Co., Loseh, Snyder and Co., Slack, Snyder Coal Co., Soddart Coal Co.,	Totals,

TABLE 2-Continued

	Names of Operators and Collieries	Philadelphia and Reading Coal and Iron Co. West Brookside, Lincoln, Good Spring, Good Spring, Good Spring, Schoenix Park No. 3, Schoeni		Kalmia washery, Sc Middle Creek washery, Sc Anchor washery, S		Totals,	Oak Hill, Sc	Pine Hill colliery, Sc Pine Hill washery, Sc	Totals,
	County	Schuylkill, Schuylkill, Schuylkill, Schuylkill, Schuylkill, Schuylkill, Schuylkill,	1	Schuylkill,	I		Schuylkill,	Schuylkill,	
N.	Cylindrical	85,248,844	110	116	16	156	12		
Number of Boilers	Horse power	450 940 940 750 1,650	3,590	460	005	3, 390	180		
Boilers	TaluduT	26 35 33 44 22 24 25 34 34 35 34 35 35 36 37 37 37 37 37 37 37 37 37 37 37 37 37	71 9,	4 10	6	80 10.3	8 1,	9	9
	Horse power	3,380 5,830 2,340 2,330 520 1,460 750 1,600 240 240 1,820 1,310 1,820 260	570 13,16	250 2:	710 1,110	280 14,27	310   1,49	006	006
			160	250 4400 460		270	490	006	900
Locomotives	Steam TiA	44601 01 1	12			12	1		
ives	Electric					:		64	67
Ils 3	Number of steam engines of	20 13 12 14 11 11 10	81	61 61 61	9	87	∞	1	1-
	Total horse power	6,277 1,863 1,372 1,372 4,327 1,380 1,380 1,880	21,928	130 256 226	652	22, 580	006	850	880
guir	Number of pumps delive	10 * 00 00 10 * 4	2.6			26	ıo	П	H
əţn	Capacity in gallons per min	3, 290 3, 290 3, 290 2, 200 2, 290 2, 290	32,436			32,436	3,400	1,000	1,000
Det.	Quantity delivered to surface minute—gallons	2,940 1,500 1,800 2,740 1,464 1,800 1,800 1,300	19,654			19,654	1,550	009	0009
	Number of electric dynamos				:	:		-	
	Number of air compressors	H	673			က		П	1

\*Four tanks

TABLE 2-Continued

	Mumber of sir compressors	-	:	es	:	-	:	-	:	
9	Number of electric dynamos	:			60	:	:			:
e ber	Ouantity delivered to surfac	450		5,000	009	518	300	450	1,800	
əşnı	Capacity in gallons per min	450		5,000	1.020	518	200	450	2,400	: 11
Buine	Water to sumps deliv	-			4	2	63		2	
	Total horse power	200	06	6,875	3,551	629	089	130	258	240
fis 1	Number of steam engines o	00	8	14	25	12	13	60	9	10
ves	Electric	:	:	:	en					
Locomotives	ıiA	:				:				
Loc	Steam		:	1	ro					2
	Toval horse power	900	215	4,100	2,850	1,301	570	270	605	825
rs	Horse power	006	40	4,100	2,400	821	570	240	425	745
of Boile	Tubular	9	¢1	97	16	ıo	9	4	က	6
Number of Boilers	Horse power		175		450	480		30	180	08
Ż	Cylindrical		L-		6	00		1	9	4
	County	Schuylkill,	Schuylkill,	Schuylkill,	Schuylkill,	Schuylkill,	Schuylkill,	Schuylkill,	Schuylkill,	Schuylkill,
	Names of Operators and Collieries	Buck Run Coal Co.	Darkwater Coal Co. Roberts colliery,	Lytle colliery,	St. Clair Coal Co.	Silverton Coal Co.	East Ridge Coal Co.	Davis Brothers Ellsworth colliery,	E. C. White and Co. Howard colliery,	Mt. Hope colliery,

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900		0.1		9		47 47,450 31,017
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150	11	:		204	1	207 37,667
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:				:		21
		:				
275		700		480		29, 751
10.13		069		480		24,086
63		01		***		265 5,665 180 24,086 29,751
		100	1		1	5,665
		0.1	1		,1 n	202
Schuylkill,		Schuylkill,		Schuylkill,		
Lorberry colliery,		Black Diamond Anthracite Coal Co. Black Diamond,		Stoddart Coal Co.		Grand totals,

TABLE 2-Recapitulation

© HH 00 H H	10
H ::00	4
19.634 1.330 6.00 6.00 6.00 6.00 6.00 1.30	31,017
22 436 1 000 1 000 1 000 1 000 1 000 1 000 1 000 1 000 1 000 2 400 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6	47,450
©10 70101	41.
8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8	37,667
No 1-0 24 25 25 25 20 00 00 00 00 00 00 00 00 00 00 00 00	207
64 69	ro
11 12 2	21
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10, 20, 11, 31, 31, 32, 32, 32, 32, 32, 32, 32, 32, 32, 32	24,086
S & & = 018 E R & + 00 C w 014	180
3, 990 1, 990 1, 500 1,	5,665
621 F- 68 L 64 G	205
Schuylkiii Schuylkiii Schuylkiii Schuylkiii Schuylkiii Schuylkiii Schuylkiii Schuylkiii Schuylkiii Schuylkiii Schuylkiii Schuylkiii Schuylkiii Schuylkiii	
Philadelphia and Reading Coal and Iron Co. Leiserring and Co. Dire Hill Coal Co. Buck Run Coal Co. Lytle Coal Co. St. Clair Coal Co. St. Clair Coal Co. St. Clair Coal Co. Back Ridge Coal Co. Back Ridge Coal Co. Mt. Hope Coal Co. Mt. Hope Coal Co. Losch, Snyder and Co. Back Diamnal Anthracite Coal Co.	Totals,

TABLE 3.—Twelfth Anthracite District, 1903 Number of Each Class of Employes at Each Colliery

	animana nun anima mana	1,169 853 497 561 561 357 76	377	8000	44	21	416
	Grand total inside and outside		4,3			4,421	4
side	Total outside	260 204 204 204 118 1198 157 157	1,579	0,000	44	1,623	117
Out	All other employes	221 1137 98 98 101 101 67 67	810	515-11	539	839	56
Persons Employed Outside	Book-keepers and clerks	00110100H0	15		00	18	4
ns Em	Sinte pickers (men)	22 23 25 25 25 25 25 25 25 25 25 25 25 25 25	159	60	63	162	
Perso	Slate pickers (boys)	820 830 820 840 840 840	291	ro	10	296	29
Occupations of	Engineers and fremen	60 + 01 00 00 00 00 00 00 00 00 00 00 00 00	240	-	1	241	18
ation	Blacksmiths and carpenters	515 v4 æ 10 w	92		1	26	9
cupa	Outside foremen		oo.		60	11	
ő	Superintendents		:		:		23
	Total inside	765 593 203 233 159 40	2,798		2,798		299
side	All other employes	197 162 77 66 64 37 81	684		684		4
Employed Inside	Сотрану теп	22 22 22 22 22 25 25	342		342		22
mploy							4
ons E	Door-boys and helpers	61 - 10 - 10 - 10	64		39		Ľ•
Persons	Drivers and runners	44 10 10 15 19 19 19	183		183		21
Occupations of	Miners' laborers	127 927 144 175 175 175 175 175 175 175 175 175 175	478		478		8
upati	suəni <b>M</b>	257 224 224 98 119 103 44 140	987		286		193
0000	Fire bosses and assistants	H400420 :	433		43		9
	Assistant mine foremen	0101	4		4	:	
	Mine foremen	# 010101HHH	13		133		-
	County	Schuylkill, Schuylkill, Schuylkill, Schuylkill, Schuylkill, Schuylkill, Schuylkill,		Schuylkill, Schuylkill, Schuylkill,			Schuylkill,
	Names of Operators and Collicries	Philadelphia and Reading Coal and West Brookside, Lincoln, Good Spring, Otto, Phoenix Fark No. 3, Glendower, Wadesville, Pine Knot,		Kalmia washery, Middle Creek washery, Anchor washery,		Totals,	Oak Hill,

382	397	318	157	573	604	604	234	1000	11.9	61	1.55	93	68	40	7,923
118	133	66	95	168	260	200	102	149	09	48	90	27	29	40	
	-			!!	:						1 1				3,078
- 4.15	5.8	100	19	57	146	146	125	2	14	83	65	13	55	âl	1,611
67	2	ro l	-	4	4	4	61	c)	grid	-	-	-	63	-	20
13	13	4		=	=	11	10	6.	01	ro					455
14	7	16	17	01 00	68	39	6.	8	t	100	20	9		10	557
12	10	S	7	96	· 62	. 69	15	on l	7	6	56	4	60	1-	448
10	1 10	, c.	-	15	18:	× 1	· 6.	00	90	61	4	01	4	6.3	147
i	- 1		-	63	91	21	-		1=5	:	-	-	-	-	26
7		-	-	p-4	*	-		-	-	+:	-	-	-	-	15
38	304	219	69	410	- 344	344	123	84	49	44	65	53	61		4,845
24	424	15		107	60	609	6	19		4	15				977
9	9	7	4	93			97	60	82	61	2	10			543
. co	00	63	:	11 :1	9		61	C1	н	67		63			25
	-	-	:	11 . 1	10	10	6.0				:				96
15	151	2	9	=	27	61	17	9	ما	C1	c.)	60	60		308
- 98	86	20	27	98	\$ .	104	17	23	12	10	30	8	6		927
153	123	97	83	150	131	131	53	20	2	67	20	16	00		1,857
· ·	63	c1	-	t-		- T		-	-				-		70 1,
ু :	21	-		-			1		-		-	1 2			Te
<b>⊣</b> :	-	-	н	-	\$7	0.1		-	1		-	-		1	. 22
Schuylkill, Schuylkill,		Schuylkill,	Schuylkill,	Schuylkill,	Schuylkill, Schuylkill,		Schuylkill,	Schuylkill,	Schuylkill,	Schuylkill,	Schuylkill,	Schuylkill,	Schuylkill,	Schuylkill,	
Pine Hill Coal Co. Pine Hill collicity.	Totals,	Buck Run Coal Co. Buck Run colliery	Darkwater Coal Co.	Lytle colliery,	St. Clair Coal Co. St. Clair celliery. St. Clair washery.	Totals,	Silverton Coal Co.	East Ridge Coal Co.	Davis Brothers Ellsworth colliery,	E. C. White and Co. Howard colliery,	Mt. Hope Colliery	Losch, Snyder and Co. Lorberry colliery,	Black Diamond Anthracite Coal Co.	Stoddart Coal Co.	Grand totals,

\*Employes included in St. Clair colliery.

TABLE 3-Recapitulation

			1
	Grand total inside and outside.	4, 10,000	7,923
tside	Total outside	1, 623 1333 1333 1333 168 168 168 168 178 199 190 190 190 190 190 190 190 190 190	3,078
no p	All other employes	88 88 8 1 2 4 4 5 5 5 6 5 5 6 5 6 5 6 5 6 5 6 5 6 5	1,611
nploye	Воок-кееретѕ and сleтка	м чампена м м м м м м м м м м м м м м	20
Occupations of Persons Employed Outside	Slate pickers (men)	Susa Hinour	224
Perso	Slate pickers (boys)	8224444888 824444888	222
Jo sı	Engineers and firemen	E853 x 4 8 8 8 8 4 9 8 4 9 9 5	448
ation	Blacksmiths and carpenters	600045000000000000000000000000000000000	1117
dno	nemerol ebishuO	managonar anar	88
ŏ	Superintendents	одненненненне	151
	Total inside	200 200 200 200 200 200 200 200 200 200	4,845
side	All other employes	684 4 4 4 224 107 107 109 9 199 1 15	977
Occupations of Persons Employed Inside	Company men	21.20 c - 4 € 5 6 0 5 v v 0 1	543
mploy	ь гим в гим	4001 20001-01-0	25
ons E	Door-boys and helpers	## 1000 0000	96
f Pers	Drivers and runners	103 104 104 104 104 104 104 104 104 104 104	308
o suo	Miners' laborers	54 28 28 28 28 28 28 28 28 28 28 28 28 28	927
cupati	. siners	987 188 188 188 188 188 188 188 188 188 1	1,857
Oce	Fire bosses and assistants	Consulta Heat H	-10
	Assistant mine foremen	ਧਾ ਰਿਜ ਜਾ ਚਿੰਜ ਜਿਹਾ	101
	Mine foremen	<u>е</u>	25
	County	Schuylkill Schuylkill	
	Names of Operators and Collieries	Philadelphia and Reading Coal and Lron Co. Leisenring and Co. Buok Run Coal Co. Buok Run Coal Co. Lytle Cral Co. Lytle Cral Co. Sit. Clair Coal Co. Sit. Clair Coal Co. Bavis Ridge Coal Co. Coal Shorters E. C. White and Co. Mt. Hope Coal Co. Lossh. Shyder and Co. Lossh. Shyder and Co. Lossh. Shyder and Co. Lossh. Shyder and Co. Stoddart Coal Co.	Totals,

TABLE 3-Continued

	Names of Operators and Collieries County January	Philadelphia and Reading Coal and Iron Co.   Schuylkill,   25   24   25   24   25   24   26   26   26   26   26   26   26	Averages, 25.2 23.6	Oak Hill, Schuylkill, 18.6 23.3	Pine Hill colliery, Schuylkill, 17.2 19.9	Buck Run colliery, Schuylkill, 24.5 29.8	Roberts collicty. Schuylkill	Lytle colliery, Schuylkill, 19.9 16.7	St. Clair colliery, Schuylkill, 34.2 22	Silverton colliery, 20 21.6	East Ridge colliery, Schuylkill, 18.5 16.3
	Изтей	នុស្សភូមិស្តី នុស្សភូមិស្តី	24.5	20.8	21.5	22.9		17.9	0.00	21.1	18.3
Number	litqA	01021122 01021122 0125112 0125	20.7	28.6	53	5.55		18.2	S .	20.7	18.7
of Days	ylst.	aannan	co .	2.1.2	21.5	\$1		18.7	19.8	15.9	14.8
s Worke	əung	គ្នា ១៩៩៩ ស្ត្រីស្ត្រីស្ត្រីស្ត្រីស្ត្រីស្ត្រីស្ត្រីស្ត្រីស្ត្រីស្ត្រីស្ត្រីស្ត្រីស្ត្រីស្ត្រីស្ត្រីស្ត្រីស្ត្	25.2	23.1	21.4	23.8		20.8	60 44 61	21.2	8.12
d Each	Sint	- ១១១១១១១ -		61.0	18.9	23.23		20.7	24.8	20.6	31.4
Month in	acquartas	2 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	104.1	20.3	19.4	22.3	22.1 22	19.2	24.6	19.2	21 18
Number of Days Worked Each Month in Breaker	Septionality	ត់តាតធត្តភ្នំ 		21.5	.1 19.5	7	5 21	17.1 23.	23.7	20.1 18.5	18.4 18.
	Хочентрег	6. 5.5 5.7 5.7 5.7 5.3 5.3 5.3 5.3 5.3 5.3 5.3 5.3 5.3 5.3	9 17.4	5 19.7		9 16.3	5.03	7.12	20.1	5 16.3	4 14.6
	Тесешьет	8.54.57.7.53.8 6. 6.9.9		21.7	113	18.6	119	1 = 21 61	19.1		15.3
	Totals	8868888	273	6. (4.5)	288	096	165	536	508	231	218

\*No time reported by company.

TABLE 3-Continued

		282	255	187	197	: 1	231		271 271 2856 286 286 287 281 281 281 281 281 281 281 281 281 281
	Totals	83       	22	H	#		61		2000 2000 2000 2000 2000 2000 2000 200
	December	19	18.8	9	10		17.2		17.9 1.9 1.9 1.9 1.9 1.9 1.9 1.9 1.9 1.9 1
	November	21.3	20.8	16	17		18.4		144.625.05.105.105.105.105.105.105.105.105.105
Breaker	тэбогоО	#	18	20	19		19.9		62 2 2 0 9 1 8 8 8 4 8 5 9 8 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9
Month in B	September	24	23.7	20	12		21.2		200 20 21 21 22 22 22 23 24 25 25 25 25 25 25 25 25 25 25 25 25 25
Each Mon	†su3uA	9.6	18.1	55	21		21.5		4861989598181818181818181818181818181818181
Worked Ea	July	24.7	23.9	12	29		61		8994 09999999 8 8 8 9 9 9 9 9 9 9 9 9 9 9 9
ys Wor	ngue	25	23.6	<del></del>	77		20.4		88 8 12 12 12 12 12 12 12 12 12 12 12 12 12
Number of Days	May	93.6	19.6	1			18.3	on	8.00 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
Number	lingA	27.3	21.3	18	16		20.7	Recapitulation	2000 2000 2000 2000 2000 2000 2000 200
	March	6.1 FC	255.33	18	18		20.9	Recap	20,000 12
	February	20.1	19.6	23	33		20.0	-E 3-	20 62 62 62 62 62 62 62 62 62 62 62 62 62
	January	6.88	S. FF		19	4	55	TABLE	1881144 : 64464 88 4 8 6 1 8 8 1 8 1 8 1 8 1 8 1 8 1 8 1 8 1
	County	Schuylkill,	Schuylkill,	Schuylkill,	Sehuylkill,	Schuylkill,			Schuykill Schuyldill Schuyldill Schuyldill Schuyldill Schuyldill Schuyldill Schuyldill Schuyldill Schuyldill Schuyldill Schuyldill Schuyldill Schuyldill
	Names of Operators and Collieries	Davis Brothers Ellsworth colliery,	E. C. White and Co.	Mt. Hope colliery.	Lorberry colliery,	Black Diamond Anthracite Coal Co.	Averages,	†Breaker under construction.	Philadelphia and Reading Coal and Iron Co. Leisenting and Co. Pine Hill Coal Co. Backwater Coal Co. Darkwater Coal Co. St. Clair Coal Co. St. Clair Coal Co. St. Clair Coal Co. Bark Ridge Coal Co. Fast Ridge Coal Co. Bast Ridge Coal Co. Shark Ridge Coal Co. Bast Ridge Coal Co. Mt. Hope Coal Co. Mt. Hope Coal Co. Losch, Shyder and Co.

TABLE 4.—Twelfth Anthracite District, 1903 Fatal Accidents in and about the Mines

11							-
Nature and Cause of Accident in Brief	E	( killing the three. Killed by fall of rock. He was about to quit work for the day, when a piece of	rock fell, killing him instantly. Fatally injured. Caught between branch chute and side of car door. Died Janu-	ary 21. Killed by falling down shaft. Killed by being caught by sprocket wheel	Fatally injured by falling down slope.		Killed by fall of fock on gangway. Killed by fall of coal. Killed by fall of slate.
County	Schuylkill, Schuylkill, Schuylkill,	Sehuylkill,	Schuylkill,	Schuylkill, Schuylkill,	Schuylkill,	Schuylkill Schuylkill Schuylkill Schuylkill Schuylkill Schuylkill Schuylkill Schuylkill Schuylkill Schuylkill	Schuylkill, Schuylkill,
Name of Colliery	Oak Hill, Oak Hill, Oak Hill,	Fine Hill,	Otto,	Brookside,	Lytle,	ring, ring, Park, le, ring,	Brookside, Brookside,
Number of orphans	0.40	:			4	::: ::::::::::::::::::::::::::::::::::	<del>4</del>
Number of widows		H	-		-	HA HAHAHAH	
Married or single	REE	M.	ις.	v. v.	M.	ONE SERVICE SERVICE	ZZ
92A	30.00	63	23	25	45		22.62
noitequooO	Miner, Miner, Miner,	Miner,	Car loader, .	Shaft topman Oiler,	Fire boss,	Miner, Miner, Miner, Laborer, Miner, Miner, Miner, Miner, Miner, Miner, Miner, Miner, Laborer,	Miner,
VillenoiisV	Slavonian, Slavonian, Slavonian,	Italian,	Slavonian, .	American,	American,	German, American, American, Slavonian, Italian, American, American, American, Polish, Polish,	American, German,
Name of Person	Joseph Procup, Michael Onder, Andrew Onder,	Dominick Wheel (alias Vitallo).	John Karak,	Adam Miller,	Michael J. Murphy,	Peter Miller, "There Robins ("herst Maurer Tobn Chevwark George Alabude Louis Trasetta, "Villiam Wythe, Edward Frank, Martin Wanak, Martin Manako Evan Hummel, Edwar Hummel, Edwar Hummel, Martin Manako Evan Hummel, Edwar Hummel, Edwar Hummel, Edwar Hummel, Edwar Hummel, Edwar Hummel, "Herst Bereit Forent George George Cours Georg	
	\$1.51.61	17	20	16	16	5	10
Date of accident	Jan.			Feb.		March April May	aune

TABLE 4-Continued

Nature and Cause of Accident in Brief	Fatally injured. Struck by backboard on	14		× 00	————	
County	Schuylkill,	Schuylkill,	Schuylkill,	Schuylkill,	Schuylkill,	Schuylkill, Schuylkill, Schuylkill,
Name of Colliery	Lytle,	Silverton,	Oak Hill,	Pine Hill, Buck Run,	Good Spring,	Roberts. Roberts. Brookside, Pine Hill.
Number of orphans	:	:	4		4.63	: LO #1
swobiw to redmuN		:	H	: :		
Married or single	vi	υż	M.	vi vi	M.M.	EEE
98A	30	1.8	43	18	21	4664
noitsquooO	Driver,	Spragger,	Miner,	Loader, Tip man,	Miner,	Slate picker, Miner, Miner,
Vationality	American,	American,	Lithuanian,.	Polish,	American,	American, American, Irish, Welsh,
Name of Person	David Richards,	Edgar Clark,	Joseph Yeneric,	Frank Chicko,	Henry Morgan,	Abe Frantz, John W. Mahoney, John Curry, Daniel Williams,
Date of accident	July 18	53	29	Aug. 14 Sept. 15	Nov. 11 Dec. 14	118 118 128 29

TABLE 5.—Twelfth Anthracite District, 1903 Non-Fatal Accidents in and about the Mines

Nature and Cause of Accident in Brief		Face cut and internally injured by fixing timber and coal from dynamite explosion.  Arm brujes and drum of ear injured by fixing the factor dynamite explosion.	工工		HHH	Shoulder blade fractured by explosion of locomotive boller.	. Injured by explosion of locomorby botter. Ribs broken by falling on mine car from chute.	Collar hone broken by fall of coal. Food ceushed by fall of coal. Leg broken. Carght between mine cars. Leg broken. Walked under descending	T
County	Schuylkill,	Schuylkill,	Schuylkill,	Schuylkill,	Schuylkill, Schuylkill, Schuylkill,	Schuylkill,	Schuylkill,	Schuylkill, Schuylkill, Schuylkill,	Schuylkill,
Name of Colliery	Oak Hill,	Oak Hill,Oak Hill,	St. Clair,	Good Spring, Wadesville,	Glendower, Lincoln, Lytle,	St. Clair,	St. Clair,	Buck Run, Phoenix Park, Brookside, St. Clair,	Oak Hill,Richardson,
Married or single	ž vi	M. M.	M.	M.M.	w K	M.	N. K	M. M.	ωχ
yge .	37	75 65	. 45	. 65	. 255		. 23	. 56 . 177 . 288	50
поіляциээО	Miner,	Miner,	Laborer,	Miner. Engineer,	Miner, Loader, Driver,	Engineer,	Locomotive helper, Loader,	Miner, Timberman, Door boy, Laborer,	Miner,
Nationality	Slavonian, English,	English	Welsh,	American,	American, American,	American,	American,	American, Irish, American, Hungarian,	Polish, German,
Name of Person	Michael Raynok, James Patterson,	George W. Bowe,	Richard Pryor,	Jacob Eisenacher, Richard McCormick,	Patrick Hobin, Irvin Strause, John Kelly,	Joseph Evens,	William Albright,	Wash, Shaffer,	Fulty Moser,
Inste of aerddent	Jan. 2	67 61	er 23	12 16	11212	30	36 Feb. 5	10 to 01 51	March 2

TABLE 5-Continued

	Nature and Cause of Accident in Brief	Ankle bruised by fall of coal. Arm broken; while bumping cars it was	caught between breaker. Foot brutsed by fall of coal. Head injured by blast. Severely injured by being caught between	mine car and top rock. Finger cut off. Was lifting a collar, when	Faces and hands burned. Progus was preparing a shot in heading. When Soditus came into heading for drill a	spark from his lamp ignited the powder. Leg broken. Struck by mine door, which was blown open by slight explosion of	gas. Arm shattered. Struck by mine car while	Head and shoulders injured by fall of	Salare. Salare. Leg breiken by piece of timber rolling	against it. Compound fracture of leg. Coal rushed from battery and caught his leg against	Drop. Leg broken. A piece from chute fell on	Anthe dislocated. Was working in gang-	way, when a lan or sale causin min. Back injured by fall of coal. Foot, cut by, an axe while rounding the	butt of a piece of timber.  Leg broken by fall of coal.
	County	Schuylkill,	Schuylkill, Schuylkill, Schuylkill,	Schuylkill,	Schuylkill,	Schuylkill,	Schuylkill,	Schuylkill,	Schuylkill,	Schuylkill,	Schuylkill,	Schuylkill,	Schuylkill,	Schuylkill
	Name of Colliery	Brookside, Lytle,	Lytle. Pine Hill, Brookside,	Brookside,	Wadesville,	Good Spring,	Phoenix Park,	Buck Run,	St. Clair. Brookside,	Glendower,	St. Clair,	Pine Hill,	Lytle.	Buck Run,
	Married or single	N. K	ZZ vi	vi	MM	M	Ä.	Z.	M.M.	M.	M.	M.	u. Z	×
	93A	- 25	34	25	330	45	41	32	239		37	33	22.22	42
	Occupation	Miner, Driver,	Miner, Driver,	Laborer,	Miner, Miner,	Fire boss,	Pulley man,	Miner,	Laborer,	Miner,	Laborer,	Miner,	Laborer,	Lithuanian,   Miner,
	Vationality	American, Polish,	Polish, American,	American,	Slavonian, .	American,	American,	American,	Slavonian,	American,	Austrian,	American,	Hungarian,	Lithuanian,.
•	Name of Person	William Kopp.	Adam Dennings, John Neidlinger, Thomas Evans,	Elias Reiner,	William Progus,	George Lelninger,	John Farley,	Richard Lipsett,	John Ditchey,	James Dormer,	Wasley Machesa,	Andrew Grander,	John Pennollow,	12   Charles Wasaluski,
	Date of accident	March 5	10	12	11 14	14	14	16	16 21	27	April 2	60	214	May 12

							1							
smoke	car	Run over by ash cart, Slipped on rail and car ran	Face and hands burned by gas. Leg broken by fall of top state. Hand mashed by being caught on car by	l on	all of con.  by concussion from ex- They fired a shot, ignit-	Face cut and bruised. Kicked by mule. Hard severally higher by fall of coal. Arm broken. Struck by mine car. Arm broken. Struck by mine car. The tenders of coals by mine car.	rush of rock in rock chute at broaker. Body injured, Caught between cage and	shaft timber. Collar bon- broken. Caught between car	and	car		Ribs broken by fall of slate. Back and leg injured by fall of slate. Log broken by fall of coal. Back injured by piece of coal rolling down	Was assisting to move part when it slipped and caught	his leg. Face Injured by blast. Eye injured. Struck by point of his pick while trimming off blast.
	Ween	cart,	'n ca	e fell	from	and the gas, Face cut and bruised. Kieked by mule, Head severely injured by fall of coal. Arm broken. Struck by nine car. Fron theritsal. Struck by nine car. Fron theritsal. Struck by nine car.	rush of rock in rock chute at breaker, sody injured. Caught between cage at	Weer	car	car.		slate ling d	nove 1d ca	f his
ne b	bet.	ash il an	gas. slate. ught e	pipe	ion a sh	ed by	at leen	bet	veen	nine		ii of I roll	to n	nt of
ercor	y. ught	by n ra	by g	Steam pipe	coal.	Kiek y fa y mii y mii	hute	nghi	oal. bety	ar. lime of by r	sway oal. coal. slate.	slate y fal oal. f coa	sting	ast.
VO S	Ca Ca	over oed o	of t of t		of of heav	Sk k k k k k k k k k k k k k k k k k k	sht	<u>ر</u>	of e	ine cen mover	of of of of sof sof s	l of of of or of or	assis n it	ast.
Wa	oken	Run over by ash cart, Slipped on rail and car	s bur fall by b	roke!	122	bruis inju Stru Stru	in r	coker	fall Cal	Stang Cang	r fall fall fall by f	y fal	When	structing
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May		June				July				Aug.	Sept.	Oct.		

TABLE 5-Continued

Nature and Cause of Accident in Brief	Faces and hands burned by explosion of gas. After the expl.sion two of the saft, y lamps were found unscrewed, which is evidence they were tampering with lamps.  Head injured and eye lost by premature blast.  Leg broken. Caught, between bumpers of mine cars.  Ann broken. Fell undor mine car.  Alth broken by blast. Miner in next breast fired without notifying him.  Shaker shaft.  Leg fractured by peing wound around shaker shaft.  Leg fractured by pump rod rolling on it.  Leg fractured by pump rod rolling on it.  Leg fractured by pump of rolling from a blast.  Body injured by piece of rock flying from a blast.  Eag injured by fall of coal.  Eag injured by piece of rock flying from a blast.
County	Schuylkill Schuylkill Schuylkill Schuylkill Schuylkill Schuylkill Schuylkill Schuylkill Schuylkill Schuylkill Schuylkill Schuylkill Schuylkill
Name of Colliery	Wadesville, Wadesville, Wadesville, Silverton, Lytle, Wadesville, Good Spring, Brookside, Otto. St. Clair, Buck Run, Oak Hill,
Married or single	עיט טּאָב אַ טּטּט טּ טּאָב אַטּטּט
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<b>no</b> ideguesO	Miner, Laborer, Miner, Miner, Driver, Priver, Oller, Miner, Miner, Miner, Miner,
Nationality	Polish, Polish, American, American, American, American, American, American, American, Lithuanian,
Name of Person	Joseph Nero John Yostachock, John Norlis, John Fisher, Thomas Leary, John W Eisenberg, Cyrus Bixler, Herry Carler, Hohn D, Williams, John D, Williams, John D, Williams, John Williams, John D, Williams, John Williams, John Williams, John MoAndrew.
Date of accident	Oct. 24 Nov. 11 Dec. 19 17 17 117 17 18 23

### FATAL ACCIDENTS

### By Falls of Coal, Slate and Roof

January 17. Dominick Vitallo, miner at Pine Hill Colliery, was working in a breast and had the breast about finished, and was about to quit work for the day, when a fall of rock from a roll in the face of breast fell without warning, injuring him severely. He died next day.

February 16. Peter Miller, a miner at Good Spring Colliery, was engaged drilling a hole at the face of breast when a piece of slate fell, killing him.

February 27. Charles Robinson, miner at Brookside Colliery, was down the breast starting the coal which was blocked in the chute, when the coal started and a lump struck a prop near by, causing a piece of rock to fall from over the prop, killing him.

March 21. John Chervaurk, a laborer at St. Clair Colliery, and his miner, were working in a breast. There was a piece of loose rock at the face and they both tried to pull it down, but failed. The miner told his laborer not to go near it until he fired another hole from beneath it, but the warning was not heeded. He told the miner he was no greenhorn. He did not work long before it fell, catching and killing him.

April 6. George Alabuda, miner at Lytle Colliery, was engaged robbing pillars. He had drilled and charged two holes, one in the top and bottom benches. He fired the bottom one, went back to see what it had done, and while examining it the top coal that he had the second hole drilled in fell on him, killing him.

April 15. Louis Trasetta, a miner at Phoenix Park, was working with a pick in the gangway face under a piece of top coal, when it fell on him killing him. His butty said he had tried to pull it down several times and failed.

April 29. William Wythe and Edward Frank, miners, were working together in a breast at Oak Hill Colliery. They went down for dinner and shortly after returning to face were killed by a fall of rock which had formed in the shape of a V. From the position in which one of them was found, it would seem that he was getting ready to prop the rock.

May 2. Martin Wanok, a miner at Wadesville Colliery, was engaged robbing pillars in big vein. When he commenced work in the morning, the place appeared quiet. He was working but a short time when a fall of coal occurred, killing him instantly.

May 5. Martin Manakowski, a laborer at Silverton Colliery, was working with timber men cleaning up a fall on the gangway W. Tunnel vein, No. 3 level Black Mine Slope, when a piece of slate 18 inches square by 2 inches thick feel on him and killed him.

June 5. George Smith, a laborer, was employed with two others at Lincoln Colliery making a turnout in No. 2 slope. They fired a blast in a roll of rock which crossed the turnout, and the miner says he examined the top after the blast and found a piece bad and told the other men to keep from under it until he could drill a hole in it. They commenced cleaning up to get the car in to make a platform on which to stand in order to drill this hole. The miner was breaking a piece of rock with a hammer, and in order to avoid the small pieces that were flying from the hammer, Smith stepped out of the way and stood beneath the bad piece, when it fell on him and killed him.

June 10. George Feaster, a miner at East Brookside Colliery, was engaged robbing pillars. He went into a pillar heading to commence a new section and it is supposed he attempted to remove some laggings from high side of heading, which caused the pillar to run and cover him and partly cover his butty. It was several hours before they were liberated. Feaster was dead, but his butty was unhurt.

June 15. Herman Nehanky, a miner working in a breast at Brookside Colliery, was prying down a piece of top coal when a piece of slate fell on him, killing him.

July 29. Joseph Yeneric, a miner at Oak Hill Colliery, was working in a breast. He had fired one blast in the opening of a pillar heading and was in the act of trimming off the loose pieces when a piece of top coal from the upper side of heading fell on him, killing him.

November 11. Henry Morgan, a miner at Good Spring Colliery, was trimming down loose coal at face of breast, after blasting, when a piece gravitated from a back slip that reached partly across the face, and killed him.

December 14. William Irving, a miner at the Otto Colliery, was prying down a lump of coal in his breast that hung along the pillar. He tried to pull it from the upper side but failed, he then went below it and attempted to pry a few pieces from beneath it. It fell on him fatally injuring him. He died next day.

December 18. John Curry, a miner was killed at No. 4 Slope, Brookside Colliery. He was engaged with three others in robbing pillars. He and his butty went to the gangway to have lunch and when they returned his other two partners who had remained at the pillar told him the place was working. Curry and Stackum, the other miner, went in to examine the place. Curry picked up a drill, sounded the roll which reached across the face and pronounced it good. About three minutes afterward it fell, killing him. The pick in Stackum's hand was broken in his attempt to escape. The rock was too large to determine accurately by sounding, whether or not

it was safe to work beneath it. There were twenty cars or more in the face.

December 29. Daniel Williams, a miner at Pine Hill Colliery, was working in a chute in West Skidmore No. 1 counter in the shaft. He came down from chute and went into the face of counter gangway to get buggy to buggy coal from his chute. This gangway is crossing old breasts and was holed full width into one, the top state of which had fallen across the breast to the thickness of 8 or 9 inches in line with the face of the gangway, leaving a piece hanging over the gangway face. The gangway man sounded this piece and concluded it was solid but did not like its appearance and was cleaning up the coal with the intention of timbering beneath it, when Williams approached him and spoke a few words when the piece fell killing him. The gangway man made a narrow escape.

#### By Cars

May 16. Evan Hummel, a laborer at Good Spring Colliery, was driving a mule after quitting time. He had 6 empty cars attached to the mule, 3 cars being a regular trip. The mule commenced kicking, and in trying to avoid coming in contact with the mule's hoofs he moved from the front to the side of the car and was caught between top slate and car. Died May 23 at Miners' Hospital.

July 29. Edgar Clark, a spragger at Silverton Colliery, jumped on empty trip of cars that were being hauled on turnout at bottom of slope, to uncouple a side chain. After uncoupling the chain he either fell under the cars or was knocked under by coming in contact with high side leg of turnout timber, and was fatally injured.

# By Explosions

January 2. Joseph Procup, Michael Onder, Andrew Onder, three miners at Oak Hill Colliery, on January 2, procured a case of dynamite to be divided equally among four miners, the representatives of two breasts. They carried the dynamite in their turn until they reached a point where both sets of men were to separate to go to their places of work. It is supposed that one of the men used a pick to open the case to divide the dynamite and thereby caused it to explode, mangling the three men beyond recognition.

# By Falling Down Shafts, Slopes, Etc.

February 6. Adam Miller, top man at East Brookside Shaft, was assisting to lower timber blocks down the shaft. He removed the bucket from the truck and put his foot to one end of the truck and

his arm around the shaft guide to push it off. In moving the truck, he reached his full length in over the shaft. While attempting to regain his footing, he fell down the shaft and was killed.

February 16. Michael J. Murphy, fire boss at Lytle Colliery, was working by night. He got on the car at bottom of inside slope to ascend the slope, the car jumped the track, throwing him down the slope. He was found at bottom with his skull fractured. He died next day at the Pottsville Hospital.

March 21. Christ Maurer, a miner at Good Spring Colliery, and his partner had fired two blasts in the face of breast, and on retiring from the blasts each man went down his own manway. Maurer's manway being the upcast, he was the first to return to face. He went back too soon. Maurer's blast did not do the work expected. It blew out on a slip thereby leaving a large cavity which the air did not reach and likely contained a quantity of carbonic oxide gas. Maurer must have put his head and body into this cavity and was overcome by the smoke and gas and fell down the manway and was killed.

#### Miscellaneous

July 18. David Richards, a driver at Lytle Colliery, was waiting for an empty trip at the bottom of underground slope. The empty car descending, was nearing the bottom. Seeing the footman engaged eating his lunch and being of liberal nature, he went to bottom and while waiting to throw the spreader chain from the car, the back-board used for retaining the coal in the car while ascending the slope, somehow or other, worked its way out over the back of the car, striking him and fatally injuring him.

# Outside—By Cars

August 4. Frank Chicko, a loader at Pine Hill Colliery, with two others, was on the gangway going home from work when they heard the motor with a trip of loaded cars coming out. They stepped to one side to let the trip pass. The motor with four cars passed, when Chicko jumped the rear end of the fourth car, thinking it was last car of trip. Inside, part of the trip had become detached and followed close behind the first part. It caught up to the first section and squeezed him between the bumpers. He died next day at Miners' Hospital.

# By Machinery

January 20. John Karak, a car loader at Otto Colliery, was inside of a box car that was being loaded, shovelling back coal. The coal train conductor ran a box car in on the siding, the car began to

gain speed, he applied the brakes, but the rails being frosty, the brakes failed to work effectively. The car bumped a car that was being loaded, catching Karak between a branch chute that extended into the car and the side of the car door, killing him.

February 16. Richard G. V. Adams, an oiler at Buck Run Colliery, was making his rounds oiling the machinery. For some cause unknown, he got over the fencing that guarded the machinery and was caught in the sprocket wheel of the elevator and killed.

September 15. William O'Brien, tip man at Buck Run Colliery, was leaving for home at quitting time. He went by a short cut under the car track and at the tip he jumped to a plank below. The plank broke precipitating him to the ground fracturing his spine. He died in Miners' Hospital.

December 15. Abe Frantz, a slate picker at Roberts Colliery, noticed the pea coal chute was blocked, and informed the breaker boss of it. He was told that there was a boy there for starting the coal. Contrary to orders he went to the chute, but was called back. As he returned he was caught by the shaker shaft and killed.

December 18. John W. Mahoney, a miner employed outside at Roberts Colliery, was blasting a side cut for mine car track from stripping to breaker. He drilled a seven foot hole at an angle of about 70 degrees, placed the greater part of a stick of dynamite in the hole and exploded it with the intention of springing the hole. A short time afterwards, he poured the greater part of a keg of black powder into the hole, and did not place any tamping or covering over the powder, with the exception of the tamping stick which he let lie loosely on it, while igniting the fuse. The blast was exploded by a spark from the match or fuse dropping into the hole. He was killed instantly.

#### THE CONDITION OF COLLIERIES

The sanitary condition of the Philadelphia and Reading Coal and Iron Company's mines is exceptionally good. The company operates the following collieries:

Wadesville, Glendower, Phoenix Park, Otto, Good Spring Nos. 1 and 3, Brookside and Lincoln.

#### LYTLE COAL COMPANY

# Lytle Colliery

The sanitary condition of this colliery is good with the exception of Skidmore Plane. A new 18 foot fan is in course of erection and when running will improve the condition of the ventilation at this

colliery. The ill effects of 1902 strike have not as yet been overcome at this colliery. Great credit must be given the management for the rapidity and care exercised in surmounting the obstacles caused by the strike. Numerous gangways and airways were closed tight and the company has been constantly engaged in reopening them, but has not yet reached the face of some of them. The Skidmore gangway is one of this number. Not one accident can be traced to the work of reopening.

#### LEISENRING AND COMPANY

# Oak Hill Colliery

The sanitary condition of this colliery is good, with the exception of drainage of East Skidmore, north basin gangway, which is bad. Credit is due the management and operator of this colliery for the speed and care exercised in removing the water and opening up the gangways and airways that were closed during the strike. Although unfortunate in having a large list of fatal accidents, not one of them can be attributed to this cause.

#### SILVERTON COAL COMPANY

# Silverton Colliery

The sanitary condition of this colliery is good with the exception of West Black Mine, gangway No. 3 dip. The Company is opening and will have finished in a short time, a new outlet to the fan. When completed, I have no doubt it will considerably improve the ventilation.

#### ST. CLAIR COAL COMPANY

St. Clair Mine

The sanitary condition of this mine is good.

# BLACK DIAMOND ANTHRACITE COAL COMPANY

Black Diamond Mine

The sanitary condition of this mine is good.

#### EAST RIDGE COAL COMPANY

East Ridge Mine

The sanitary condition of this mine is good.

#### DAVIS BROTHERS

#### Ellsworth Mine

The sanitary condition of this mine is good.

#### E. C. WHITE AND COMPANY

#### Howard Mine

The sanitary condition of this mine is good.

#### MT. HOPE COAL COMPANY

# Mt. Hope Mine

The sanitary condition of this mine is good with the exception of the big vein workings, which in my opinion, owing to the condition of the same, are hard to ventilate, they having been worked over and over again by different parties, and the coal being more or less crushed. I found in the beginning of the year that the ventilation in the Seven Foot vein was not what it should be, and after consulting with Mr. Kynor, the superintendent, on the matter, he neither lost time nor spared money to improve it. There is at present a new 12 foot fan running on this vein and giving good satisfaction.

#### BUCK RUN COAL COMPANY

#### Buck Run Mine

The sanitary condition of this mine is good.

#### PINE HILL COAL COMPANY

#### Pine Hill Mine

The sanitary condition of this mine is good, with the exception of the East Red Ash gangway in shaft, the drainage of which is bad. Though being in bad condition it does not reflect any discredit upon the management. The gangway is being robbed and will be finished in a short time. The track heaves a great deal and causes unlimited trouble and expense. There being but a few men at work in this gangway, and the limit of work being of small area, the expense incurred under the circumstances would hardly be necessary.

#### LOSCH, SNYDER AND COMPANY

### Lorberry Colliery

This colliery has been idle the greater part of the year and is at present drowned.

#### Improvements

# PHILADELPHIA AND READING COAL AND IRON COMPANY Otto Colliery, West Slope

A tunnel has been driven through saddle at No. 50 breast in the east top bench gangway. Length of tunnel is 575 feet. A continuation of the same tunnel has been driven from the top to the bottom bench of mammoth vein, a distance of 60 feet.

The main tunnel near the bottom of slope has been extended from the top to the bottom bench of mammoth vein, also an air tunnel to ventilate the same.

# Swatara Basin Slope

A tunnel has been driven through saddle from southern to northern basin, length 182 feet.

A tunnel has been driven on the top of No. 1 plane from bottom to the top bench of mammoth vein, length 115 feet.

A tunnel is now being driven in West Skidmore water level gangway to Buck Mountain vein. At present writing it has been driven 100 feet.

#### Pine Knot Shaft

The Pine Knot Shaft has been sunk 752 feet during the year. The depth of shaft at end of year was 1,017 feet.

# Wadesville Colliery

A plane has been driven on West Holmes vein gangway 765 feet long, from which there will be worked 2 lifts of the Holmes, Primrose and Orchard veins. The rope will be run through an 8 inch bore hole from the surface to handle the coal on this plane.

# Middle Creek Colliery

The breaker has been remodeled into a washery and the coal in the old banks will be reclaimed.

# Good Spring Colliery

No. 1 Slope.—One (1) trial slope on No. 2 Lykens Valley vein has been sunk to a depth of 121 yards and stopped.

Mammoth vein tender slope has been sunk from second lift to third lift, a distance of 305 feet, making total length of slope to date 1,081 feet.

No. 3 Slope.—One (1) steam pipe bore hole 8 inches in diameter has been sunk to pump house on second lift, the depth of which is 447 feet.

A second steam pipe hole is now being sunk and has reached a depth of 132 feet.

One tunnel from Mammoth to Skidmore vein, second lift, 49 1-3 yards long.

One 18 foot standard fan has been erected to ventilate second lift workings.

# Lincoln Colliery

The first coal dumped in new breaker was on June 22, 1903, and the old breaker abandoned July 1, 1903.

One set standard return tubular boilers, 18 feet long 6 feet in diameter, was erected.

One complete new fan blast plant has been erected.

One tunnel, fourth lift, No. 2 slope west, No. 5 vein gangway from No. 5 to No. 4 vein, 150 feet long.

Two new blocks of miners' houses  $2\frac{1}{2}$  stories high have been built.

# West Brookside Colliery

One tunnel on third lift basin, slope west gangway from No. 5 to No. 4 vein, 37 1-3 yards.

One tunnel on third lift basin, slope west gangway from No. 5 to No. 4 vein, 34 yards.

One tunnel on fifth lift basin, slope west gangway from No. 5 to No. 4 vein, 48 yards.

# East Brookside Colliery

The water and coal shaft had reached a depth of 1,061 feet, December 31, 1903.

One pair direct acting engines 24 inch cylinder, 5 foot stroke, has been placed in position to complete the sinking of shaft.

#### LYTLE COAL COMPANY

# Lytle Colliery

A new air shaft was sunk 60 feet deep from surface to Big Tracey

vein, connecting with an airway driven in the Tracey seam from the second level.

A new 18 foot reversible fan built of concrete and iron has been erected over the Tracey airway.

Second level, a tunnel has been driven from Big Tracey to Little Diamond, east and west of the shaft, a distance of 160 feet and 155 feet respectively. These two tunnels were driven to make connection to cross from the east to west side of the shaft.

A tunnel has been driven from the Big to the Little Tracey, a distance of 145 feet. Air tunnel from the Big Tracey to the Big Diamond is being driven, and is now in 100 feet.

Fourth level, a tunnel has been driven from the Big Diamond, cutting the Little Diamond at a distance of 126 feet.

Fifth level, a tunnel has been driven from White Ash cutting 4 foot vein at a distance of 40 feet. An air tunnel has been driven from Primrose, cutting the Holmes at a distance of 78 feet.

A tunnel has been driven from Big Diamond south dip, cutting the Big Diamond on the north dip at a distance of 350 feet.

A double track tunnel has been completed from the Orchard to the Big Diamond vein, a distance of 285 feet, 120 feet of which have been driven this year.

A tunnel has been driven from the Diamond to the Orchard 190 feet. They expect when it is completed it will be 400 feet long.

#### BUCK RUN COAL COMPANY

# Buck Run Colliery

There has been an inside slope sunk on the Crosby vein, a distance of 358 feet, on an angle of 46 degrees. A tunnel has been started north to the Daniel vein and gangways turned east and west on the Crosby.

# DARKWATER COAL COMPANY

# Roberts Colliery

Roberts Colliery, formerly under control of the Darkwater Coal Company, is now operated by the Buck Run Coal Company. A new breaker which, when completed, will have a capacity of 400 tons, is being erected. New slopes are being sunk in the Skidmore vein in the back basin and the lower bench of the Mammoth.

#### THE ST. CLAIR COAL COMPANY

The inside Buck Mountain slope has been extended at the drift workings to a depth of 1,430 feet.

There has been erected a blacksmith, carpenter and machine shop

on the site of the one burned down last September, and also an iron engine house at head of dirt plane to replace the one burned down last October.

They have constructed two new dams a short distance above the shaft boiler house, and have laid a two-mile line of 6 inch cast iron pipe to convey water from the dams to the boiler house at the breaker.

There has been considerable work in the way of improving the electric plant. They have added a 24x22 inch McEwen engine of 450 horse power, running 190 revolutions per minute, which is directly connected to an 8 pole Fort Wayne generator of 278 K. W., and will give a total haulage output of 1,400 amperes at 275 volts; also a new switch board to accommodate the instruments rendered necessary by the new unit.

The small engine running the light dynamo has been replaced with a new 80 horse power McEwen engine.

Another 8 ton electric locomotive has been placed in the drift slope workings.

An electric pump of the 3 plunger vertical style, having a capacity of 50 gallons per minute at 325 feet vertical, has been placed at the bottom of the new inside slope.

A large drum electric hoist has been installed to hoist on the inside plane at the tunnel workings.

#### SILVERTON COAL COMPANY

# Silverton Colliery

A tunnel has been driven direct from the bottom of Salem slope to South Salem vein 511 feet.

A tunnel has been driven from second lift of Black Mine slope 223 feet long to the first and second dip of Tunnel vein.

A tunnel has been driven in the water level drift from the first to the second dip of the Salem vein.

#### BLACK DIAMOND ANTHRACITE COAL COMPANY

The slope reported last year is completed at a distance of 340 feet at an average angle of 32 degrees. The west gangway has been extended from the slope 1,200 feet. The east gangway has been extended 450 feet. When it reaches a point 750 feet east of the present slope, a permanent slope will be put down.

The breaker, the foundation of which was reported to be under course of construction last year, is near completion and is expected to resume work in the near future. Its capacity will be 1,500 tons per day.

A narrow gauge railroad connecting the slope with trestle plane, and that connecting with breaker is about to be constructed. A small locomotive, 36 inch gauge, will supply the motive power.

A commodious office and supply house building, a blacksmith and carpenter shop and boiler house have been erected during the year.

#### Mine Foremen's Examinations

The annual examinations of applicants for mine foremen and assistant mine foremen certificates of qualification were held in the court house, Pottsville, April 28 and 29, and August 25, 26, 27 and 28. The board consisted of Michael J. Brennan. inspector, Pottsville; John Maguire, superintendent, Pottsville; Fred. Osman, miner, Newtown; Jacom Amos, miner, Branchdale, and the following persons were recommended for certificates:

#### Mine Foremen

Evan C. Jones, St. Clair.

#### Assistant Mine Foremen

Michael J. Ward, Minersville; Henry Adams, Minersville; Irvin Daubert, Llewellyn; John O'Brien, Heckscherville; John H. Augustine, Llewellyn; Michael O'Brien, Heckscherville; Martin Dougherty, St. Clair; Patrick J. McCullough, St. Clair; Irvin A. Lasch, Minersville; James F. Haley, Joliett; Daniel J. Farley, Tower City; Samuel W. Miller, Tremont; David J. Williams, Joliett; John E. Davy, Llewellyn; George H. Godfrey, Minersville; William Shearstone, Minersville; Oliver Zerby, Llewellyn; Luke Nolan, Wade; Joseph H. Evans, Peoples; Rudolph J. Schneider, Reinerton; Charles E. Shoffstall, Minersville; Louis Steinman, Llewellyn; Jacob Bittinger, Tremont; Arthur Hughes, Heckscherville; Richard Foran, Minersville; H. H. Adams, Tower City; James Sweeney, Duncott; William Keiser, Reinerton; Irvin Zimmerman, Llewellyn; Frank H. Schneider, Reinerton; Richard Birch, St. Clair; Jacob Hoppstetter, Minersville; Charles Maurer, Tower City; Henry J. Murphy, Tower City; Harry L. Kopp, Tower City; George M. Latshaw, Tower City; John J. Mc-Andrew, Minersville; John Farrell, Tower City; Adam Williams, Joliett; Michael Close, Heckscherville; David Hughes, Minersville; John J. Cavanaugh, Good Spring; Daniel P. McGinley, Tremont; George Myers, Reinerton; John J. Kelley, Wade; Evan D. Jenkins, Wade; Leonard F. Schmidt, Minersville; Samuel Clark, Joliett; William Davis, St. Clair; William H. Smith, Tower City; John Charles, Minersville; Thomas O'Boyle, Glen Carbon; Elias Schreffler,

Joliett; William A. Shoffstall, Joliett; Ferdinand Richter, Joliett; Michael Appleby, Branchdale; Samuel Evans, Minersville; William E. Minnig, Joliett; William F. Flannery, St. Clair; Henry Seeber, Pottsville; James J. Burns, St. Clair; Nicholas Curran, Glen Carbon; James J. Brennan, Branchdale; William J. Lipsett, Heckscherville; Thomas F. English, Donaldson; Timothy J. Lyons, Joliett; John N. Eichenberg, Duncett; Thomas B. Conway, Joliett; James Connelly, Branchdale; George Athey, Donaldson; Thomas Tobin, Glen Carbon; Patrick J. Smith, Wade; Frank B. Reilly, Minersville; Edward O. Williams, St. Clair; John James, Minersville; James Moran, Minersville; Joseph Lloyd, Minersville; John Dougherty, Minersville; Charles Rumberger, Joliett; Salathiel Harris, Minersville; John Weideshold, Minersville; Christopher Ward, Minersville.



# Thirteenth Anthracite District

SCHUYLKILL COUNTY

Pottsville, Pa., March 1, 1904.

Hon. James E. Roderick, Chief of Department of Mines:

Sir: I have the honor of herewith submitting my first annual report as Inspector of Mines for the Thirteenth Anthracite District for the year 1903.

It contains the usual tabular statements of mine accidents, the number of each class of employes, the quantity of coal produced, a brief description of the sanitary condition of the collieries, the improvements made in the past year, and other useful information.

Respectfully submitted,

JOHN CURRAN,

Inspector.

# Thirteenth Anthracite District, 1903

# SUMMARY OF STATISTICS

Number of mines in district,	22
Number of mines in operation,	22
Number of tons of coal produced,	3,476,312
Number of tons shipped to market,	3,029,463
Number of tons sold at mines to local trade,	55,010
Number of tons consumed at mines in generating steam	
and heat,	391,839
Number of persons employed inside the mines,	4,698
Number of persons employed outside,	3,131
Number of fatal accidents inside the mines,	17
Number of tons produced for each fatal accident inside,	204,489
Number of persons employed per fatal accident inside,	276
Number of fatal accidents outside,	7
Number of persons employed per fatal accident outside,	447
Number of wives made widows by fatal accidents,	10
Number of children orphaned by fatal accidents,	34
Number of non-fatal accidents inside of mines,	86
Number of persons employed per non-fatal accident in-	
side,	55
Number of non-fatal accidents outside,	20
Number of persons employed per non-fatal accident	
outside,	157
Number of steam locomotives used inside,	5
Number of compressed air locomotives used inside,	2
Number of fans used for ventilation,	25
Number of gaseous mines in operation,	. 13
Number of non-gaseous mines in operation,	9

# TABLE A.—Thirteenth Anthracite District, 1903

# PRODUCTION OF COAL

Names of Companies	Tons
Lehigh Coal and Navigation Company,	944,266
Philadelphia and Reading Coal and Iron Company,	519,981
Lehigh and Wilkes-Barre Coal Company,	603,478
Mill Creek Coal Company,	473,621
Coxe Brothers and Company, Incorporated,	$320,\!205$
Truman M. Dodson Coal Company,	135,100
Dodson Coal Company,	212,647
Beddall Brothers,	96,099
Dunkelberger and Young,	10,929
D. Shepp Estate,	$23,\!111$
Slattery Brothers,	. 21,604
Gorman and Campion,	29,770
William Cook,	4,406
Joseph H. Denning,	7,079
Butcher Creek Coal Company,	12,507
Phillips Brothers,	2,500
Carson Coal Company,	8,770
Smith, Meyers and Company,	50,239
Total,	3,476,312
Production by Counties	
Schuylkill,	3,476,312

TABLE B.-Thirteenth Anthracite District, 1903

Fatal and non-fatal accidents; number of tons of coal produced per accident; number of persons employed; number employed per accident

11		ion incomining	
episi	Mumber of employes ou per non-fatal accident	260 37 140 144	157
əpisi	Number of employes ou	668 5119 5117 282 242 140 140	447
əpist	Number of employes in Per non-fatal accident	93333333333333333333333333333333333333	55
əpisı	Number of employes in per fatal accident	602 199 275 529 379 117 101 47	276
se	Total number of employe	1,872 1,313 1,615 811 621 373 489 182 84 102	7,829
əpis	Number of employes out:	668 5117 5242 2482 2482 2482 140 90 90 44 122	3, 131
əp	Number of employes inst	1,204 1,098 1,098 379 373 203 92 47 6	4.698
per 9	Tons of coal produced norm	72 636 34 655 40, 232 29 601 7, 506 4, 406	40,422
per	description of the description o	472, 133 129, 945 150, 870 150, 870 67, 621 320, 205 67, 550 106, 324 29, 770	204,489
idents	IstoT	11. 8. 2. 2. 2. 2. 2. 2. 2. 2. 2. 2. 2. 2. 2.	106
Non-Fatal Accidents	əbistuO	S14 HHS	20
Non-Fg	Inside	8 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	98
ents		H H 6006000000	22
Fatal Accidents	əbistuO		2
Fata	əbiznI	0444400	17
	Names of Companies	Lehigh Coal and Navigation Co., Philadelphia and Reading Coal and Iron Co., Lehigh and Wilkes-Barre Coal Co., Mill Creek Coal Co., Coxe Brothers and Co. Incorporated, Truman M. Dodson Coal Co., Beddall Brothers, Gorman and Campion, William Cook, William Cook, Carson Coal Co.	Totals and averages for district,

TABLE C.—Thirteenth Anthracite District, 1903 Classification of Fatal Accidents

		Istot busut)	4-40 000001-01-00	24
		Total outside	63	2
ser		Miscellaneous causes		
of Mir		By boiler explosions		
Outside of Mines		By suffecation		-
Our		ІЗУ тасіліпету		20
		By cars	-	60
		Total inside	01m01 01m01 01m01	17
		Miscellaneous causes		
		Suffocated by coal, etc.	- : : : : : : : : : : : : : : : : : : :	63
		By mules		
		seiretted at bedrur')		
	By Falling Into	Manways, breasts, etc.		
a di		sədols		
Inside of Mines	By F	Shafts		=
side of		By blasts, etc.		61
Ins		Powder and dynamite		
		Smothered by gas		
		By explosion of gas		63
		By mine cars		co
	jo	looA		4
	By Falls	Slate		
	By	Coal		C1
			January, March, March, May, June, June, August, September, October, November,	Totals,

TABLE D.—Thirteenth Anthracite District, 1903 Classification of Non-Fatal Accidents

		Grand total	2000 11 20 20 11 20 20 20 20 20 20 20 20 20 20 20 20 20	106
		Total outside	онне <b>о</b> н ненен	8
ss.		Miscellaneous causes	ਚ ਜਜ਼ਲਮ ਜਜ਼ਜ਼ਜ਼	13
f Min		By boiler explosions		
Outside of Mines		By suffocation		
Out		Ву тасhineту	63	4
		By cars	c3 H	83
		- Potal Inside	r-004000000000	98
		Miscellaneous causes	1 22 1	7
		Suffocated by coal, etc.		
		By mules		-
		Crushed at batteries	-	-
	Into	Manwaya, breasts, etc.	THE STATE OF THE S	60
ūΣ	By Falling Into	Slopes		-
Mine	By F	Shafts		:
Inside of Mines		By blasts, etc.	. F	8
Ins		Powder and dynamite	-	-
		Smothered by gas		:
		By explosion of gas	010100 00000000000000000000000000000000	30
		By mine cars	H 4H 9000	12
	of	R00f	H67 H 64 K0	6
	By Falls of	Slate		63
	By	Coal	намнан рання	16
			January, February March, May, May, June, July, September, September, December,	Totals,

Occupations of Persons Killed or Fatally Injured Inside and Outside the Mines TABLE E.-Thirteenth An thracite District, 1903

	Grand total	446 00000H0H0	22
	Total outside	63 .11 .12 .11 .11	7
1	All other employes		ro
	Book-keepers and clerks		:
	Slate pickers (men)		
Outside	Slate pickers (boys)		-
ō	Engineers and firemen	-	H
	Blacksmiths and carpenters		
	Outside foremen		
	Superintendent		
	ebiani IstoT	0H0 00 00 00H0	17
	All other employes		
	Company men		67
	Pumpmen		
	Door-boys and helpers		-
Inside	Drivers and runners		1
	Miners' laborers	1 1 200 11 111	
	Minera		
	Fire bosses and assistants		
	Assistant mine foremen		1:
	Mine foremen		1 :
		January, Rebruary, March, March, April May, June, July, July, July, November, October, November,	Totals,

TABLE F.—Thirteenth Authracite District, 1903 Occupations of Persons Injured Inside and Outside the Mines

	Grand total	1100 100 1100 1100 1100 1100 1000
	Total outside	×
	All other employes	
	Book-keepers and clerks	
	Slate pickers (men)	
Outside	Slate pickers (boys)	1
	Engineers and firemen	
	Blacksmiths and carpenters	
	Outside foremen	
	Superintendent	
	ebiani IstoT	F-00488810880171F   98
	All other employes	6767
-	Company men	1 2
	Pumpmen	
	Door-boys and helpers	
Inside	. sand runners	4H 0HH 0
	Miners' laborers	
		ΦΦΦΘΝΑΙΝΟΝΑΙΝΟΝΙΟ
	Fire bosses and assistants	
	Assistant mine foremen	
	Mine foremen	
		January, February Amerch April, May Mun. Mun. July July August Coctober, November, December, Totals,

## TABLE G.—Thirteenth Anthracite District, 1903

Nationality of Persons Killed or Fatally Injured Inside and Outside the Mines

	American	Welsh	Irish	German	Polish	Hungarian	Italian	Slavonian	Lithuanian	Totals
January, February, March, April, May, June, July, August, September, October, November, December,	1	1 1		1		i	1		1	4 1 3 2 3 2 2 2 1 1 2 1 3
Totals,	7	2	2	1	5	3	1	2	1	24

# TABLE H.—Thirteenth Anthracite District, 1903

Nationality of Persons Injured Inside and Outside the Mines

	American	English	Weish	Irish	German	Polish	Hungarian	Italian	Lithuanian	Austrian	Russian	Totals
January, February, March, April, May, June, July, August, September, October, November, December,	5 2 1 1 2 4 1 6 1 5 2	1	1		2	3 2 4 2 3 1 1 2 1 1 3 7	1 1 1 3 2	1	1 1 1	1	2	11 10 10 11 11 10 10 11
Totals,	31	1	2	12	3	30	16	1	5	3	2	10

TABLE I.-Thirteenth Anthracite District, 1903

Operators and mines, kind of openings, type and size of fans, size of furnaces, volume of air produced by fan or furnace per minute, number of splits of air currents, number of persons employed inside, and quantity of air produced for each employe per minute

Average number of cubic feet per provided for each person	480 504 471 200	285	944 789 617 494 579	314
Number of persons employed	170 110 141 210	327	162 57 98 98 44	130
Number of cubic feet per minute passing out at out- let	90,750 69,000 83,757 69,000	163, 155	155,000 48,000 58,585 50,085 28,350	69,913
Total quantity of air per ming in all minge circulating the the splits in cubic feet	81,760 55,500 66,493 61,000	161,775	153,000 45,000 56,790 48,425 25,485	65,498
Number of cubic feet of air per minute entering the mine at inlet	81,760 55,500 66,493 61,000	161,775 93,400	45,000 48,000 56,790 48,425 25,485	65,498
Number of splits of air cur-	4000	16	10 014401	10
Power used	Steam,. Steam,. Steam,.	Steam,. Steam,.	Steam, Steam, Steam, Steam, Steam,	Steam Steam Steam,
Name of fan	Guibal, Guibal, Guibal, Guibal,	Guibal, Guibal, Guibal,	Gulbal, Gulbal, Gulbal, Gulbal, Gulbal, Gulbal,	Guibal. Guibal, Guibal,
Water gauge developed—in	2.1.2 1.3.1 1.3.1	1.5	8:11	9:0:0
Number of revolutions per minute	70 76 75	3333	655 655 655 655 655	888
Depth of blades in feet	5.66	229	4 4 4 0 4 0 . 6 - 6 0 0	4 4 6 8.3
Width of blades in feet	*****	6 6 6.10	<u>ಬೆ ಬ ಬ 4 4 ಬ</u> ಬ 4 4 10 4 <b>ಬ</b>	440
Diameter of fan in feet	224 28	218	855558	16 16 25
Method of ventilation	Fan, Fan, Fan,	Fan, Fan,	Fan, Fan, Fan, Fan, Fan,	Fan, Fan,
Gaseous or non-gaseous	Gaseous, Gaseous, Gaseous,	Gaseous, Gaseous, Gaseous,	Gaseous, Gaseous, Non-gas, Non-gas. Non-gas.	Gaseous, Gaseous, Gaseous,
Kind of opening	Shaft & drift Slope, Slope & drift,. Shaft & drift,.	Shaft,Slope,	Slope, Slope, Slope, Slope, Slope, Drift,	Slope, Sl
Names of Operators and Mines	Lehigh Coal and Navigation Co. Colliery No. 8. Colliery No. 12. Colliery No. 10.	P. and R. Coal and Iron Co. Silver Creek, Eagle Hill,	Lehigh and Wilkes-Barre Coal Co. Audenried No. 4, Audenried No. 16, Honey Brook No. 5, Green Mountain. No. 8 South Dip tunnel,	Mill Creek Coal Co. Buck Mountain, Buck Mountain,

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53,860 64 to 27,060	74.710	57,:02	18,500	4,9110							
42,960 61,250 24, v00	74,480	62, 930	17,200	4,500			:    :    :    :				
42,960 61,270 24,80	74,480	62, 930	17,200	4,500							
9 : !!			!			i h	:				
Steam,. Steam, Steam,	Steam, Steam,	Steam, .	Steam,	Steam,	:						
Pelyer, Guibal, Guibal,	Guibal, Guibal,	Guibal, Guibal,	Guibal,	Guibal.					:	:	
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125 70 60	62	75	*	09		:	:	:	:	:	i
5.10 5.9 6.6	5.10	9	4	3.4				-			:
66.33	4 9	5.10	63	4	:	:	:	:	:	:	:
2883	27	18	12	12	:	:	:	:	:	- :	:
Fan, Fan,	Fan,	Fan,	Fan,	Fan,	Natural,	Natural,	Natural.	Natural,	Natural,	Natural,	Natural,
Gaseous, N n-gas. Non-gas.	Gaseous, Gaseous,	Gascous, Gascous,	Gaseous,	Non-gas.	Non-gas.	Non-gas.	Non-gas.	Non-gas.	Non-gas.	Non-gas.	Non-gas.
Shaft & slope, Shaft & slope, Slope,	Shaft,	Shaft & slope. Shaft & slope.	Drift & slope,	Drift,	Drift,	Drift,	Drift,	Slope,	Slope,	Slope,	Drift,
Coxe Brothers and Co., Inc. Oneida No. 1. Oneida No. 2. Oneida No. 3.	Truman M. D. dson Co. Kaska William, Kaska William,	Morea, Morea	Beddall Brothers Greenwood,	Dunkleberger and Young West Lehigh,	D. Shepp Estate East Lehigh,	Slattery Brothers Tuscarora,	Gorman and Campion Bell,	Oakley,	Joseph H. Denning Sebastopol,	Butcher Creek Coal Co.	Phillips Brothers Silver Hill,

.Not running.

TABLE 1.—Thirteenth Anthracite District, 1903 Operators, Location of Collieries, Railroads, Etc.

Railroad to Mine	Central Railroad of N. J. Central Railroad of N. J. Central Railroad of N. J. Central Railroad of N. J.	Philadelphia and Reading Philadelphia and Reading	Central Railroad of N. J. Central Railroad of N. J.	Lehigh Valley Lehigh Valley	D., S. and S. Activities of the state of the	Philadelphia and Reading	Lehigh Valley	Central Railroad of N. J.	Philadelphia and Reading	Philadelphia and Reading	Philadelphia and Reading
P. O. Address	Lansford, Lansford, Lansford, Lansford,	Pottsville,	Audenried,	New Boston,	Drifton,	Kaska,	Morea,	Tamaqua,	Tamaqua,	Tamaqua,	Tuscarora,
Name of Super-	Baird Snyder, Baird Snyder, Baird Snyder, Baird Snyder,	John Veith, John Veith,	George B. Hadesty, George B. Hadesty,	J. Elmer Jones,	L. C. Smith,	D. Beveridge,	J. H. Dugan,	M. A. Gerber,	John Young,	E. M. B. Shepp,	Daniel Slattery,
P. O. Address	Lansford, Lansford, Lansford, Lansford,	Pottsville,	Wilkes-Barre,	New Boston,		Audenried,	Audenried,				
Name of General Superintendent	Wm. D. Zehner, Wm. D. Zehner, Wm. D. Zehner, Wm. D. Zehner,	Wm. J. Richards,	C. F. Huber,	T. D. Jones,		E. L. Bullock,	E. L. Bullock,				
County	Schuylkill, Schuylkill, Schuylkill, Schuylkill,	Schuylkill, Schuylkill,	Schuylkill,	Schuylkill,	Schuylkill,	Schuylkill,	Schuylkill,	Schuylkill,	Schuylkill,	Schuylkill,	Schuylkill,
Names of Operators and Col- lieries	Lehligh Coal and Navigation Co. Colliery No. 12. Colliery No. 12. Colliery No. 12. Colliery No. 10.	Philadelphia and Reading Coal and Iron Co. Silver Creek, Eagle Hill,	Lehigh and Wilkes-Barre Coal Co. Audenried No. 4, Honey Brook No. 5,	Mill Creek Coal Co. Buck Mountain, Vulcan,	Coxe Brothers and Co., Inc. Oneida Nos. 1, 2 and 3,	Truman Dodson Coal Co. Kaska William,	Morea,	Beddall Brothers Greenwood,	Dunkleberger and Young West Lehigh,	D. Shepp Estate East Lehigh,	Slattery Brothers Tuscarora,

Schuylkill, Edward Gorman, Mahanoy City, Edward Gorman, . Mahanoy City, Philadelphia and Reading	Schuylkill, William Cook, Tuscarora, Tuscarora,	Philadelphia and Reading	Philadelphia and Reading	Philadelphia and Reading	Central Railroad of N. J.	Philadelphia and Reading
Mahanoy City,			Frackville,			H. D. House, Reynolds,
Edward Gorman, .			P. F. McLaughlin,			
Mahanoy City,	Tuscarora,	St. Clair,	St. Clair,	Mahanoy City,	Plymouth,	Minersville,
Edward Gorman, .	William Cook,	Schuylkill, Joseph H. Denning St. Clair,	Schuylkill James J. Whims, . St. Clair, P. F. McLaughiln, Frackville,	Schuylkill, David E. Phillips,	Schuylkill, H. E. Resinger, .	Schuylkill, Henry Meyer, Minersville,
Schuylkill,	Schuylkill,	Schuylkill,	Schuylkill	Schuylkill,	Schuylkill,	Schuylkill,
Gorman and Campion Bell,	William Cook Oakley,	Joseph H. Dennings Sebastopol,	Butcher Creek Coal Co.	Phillips Brothers Silver Hill,	Carson Coal Co.	Smith, Meyer and Co. Washery,

\*Abandoned May, 1903.

Number of tons of coal mined in each colliery, number of days worked, number of persons employed, number killed and injured, TABLE 2.—Thirteenth Anthracite District, 1903 number of kegs of powder used, etc.

	Number of horses and mules	126 33 96 62	317	76	129	68	112	85 85	73	
	Number of pounds of dynamite	78,000 30,250 44,100 40,900	193, 250	10,080	25,002	61,035 126,570	187,605	15,275	20,500	
	Number of kegs of powder used	360 810 1,088 960	3,218	4,278 1,502	6,180	5,470	8,598	6,473	13,447	
	Number of non-fatal accidents	20:02	13	111	17	19	29	127	16	1
	Number of fatal accidents	c1 : H :	00	4-1	20	61 69	ro	62 :	2	
	Number of employes	25.3 20.4 5.40 4.85	1,879	756	1,313	747	1,615	421 390	811	
	Number of days worked	265 248 248 240	253	245 263	254	230	237	238	241	
	Total production of coal in tons	380, 240 92, 467 278, 838 242, 721	944,266	284, 176 235, 805	519,981	282, 632 320, 846	603,478	231,464 242,157	473,621	
tence,	Number of tons sold to local trade and used by employes	7, 691	21,670	3,037	5,767	3,052	3,052			1
- bowaci	Number of tons used for steam and heat at colliery	18, 692 16, 855 23, 843 18, 063	77,483	31, 327 32, 203	63,730	42,941 36,943	79,884	18,233	38,408	
2000	Number of tons of coal shipped by rail or otherwise	303,857 75,582 248,324 217,350	845,113	249,813	450,684	236, 639	520,542	213, 231 221, 982	435,213	
	County	Schuylkill, Schuylkill, Schuylkill, Schuylkill,		Schuylkill,		Schuylkill,		Schuylkill,		
	Names of Operators and Collieries	Lehigh Coal and Navigation Co. Colliery No. 8. Colliery No. 12, Colliery No. 16, Colliery No. 16,	Totals,	Philadelphia and Reading Coal and Iron Co. Silver Creek, Eagle Hill,	Totals,	Lehigh and Wilkes-Barre Coal Co. Audenried No. 4, Honey Brook No. 5,	Totals,	Mill Creek Coal Co. Buck Mountain, Vulcan,	Totals,	

\*Totals in this column are averages.

	6,522 17,919 83	1,850 25,950 34	4,571 42,500 62	155 10,000 17	25 1,900 8	135 2,700 11	200	335	146 750 2	8 1,400 11	5 1,200 7	30 25 1	00	63	
	9	19	2	es					-				::		
	2	00	2					-					-		
	621	373	489	182	45	129	47	84	10	37	89	31	122	69	
	238	197	243	292	199	239	240	219	266	277	222	108	28	256	
	320, 205	135,100	212,647	96,099	10,929	23,111	21,604	29,770	4,406	7,079	12,507	2,500	8,770	50,239	
	3,660	656	846	12,195	154	1,987	78	62	288	3,861	48	22		64	
	54,240	27,375	40,000	4,500	597	009	240	1,533	309	009	450	20	480	1,500	
,	262, 305	107,069	171,801	75, 40;	9,578	20,524	21,286	28,175	3,719	2,618	12,009	2,458	8,290	48,675	
	Schuylkill,	Schuylkill,	Schuylkill,	Schuylkill,	Schuylkill,	Schuylkill,	Schuyikill,	S-huylka'l,	Schuylk II,	Schuylkill,	Schuylkill,	Schuylkill,	Schuylkill,	Schuylkill,	
	Coxe Brothers and Co., Inc. Oneida Nos. 1, 2 and 3,	Truman M. Dodson Coal Co. Kaska William,	Morea, Dodson Coal Co.	Greenwood, Beddall Brothers	West Lehigh,	East Lehigh, D. Shepp Estate	Slattery Brothers Tuscarora,	Gorman and Campion Bell,	Oakley, William Cook	Sebastopol, Joseph If. Denning	Butcher Creek Coal Co.	Silver Hill, Phillips Brothers	Carson washery,	Washery, Smith, Meyer and Co.	

\*Formerly Juglar.

# TABLE 2-Recapitulation

1		63
Number of horses and mules	1129 221 1139 238 238 238 238 238 238 24 24 25 26 27 27 27 27 27 27 27 27 27 27 27 27 27	892
Number of pounds of dynamite	193 250 25 0.02 187 605 20 300 20 300 20 300 20 42 500 42	535,401
Number of kegs of powder used	28 218 6.188 6.188 6.188 6.189 6	45, 425
Number of non-fatal accidents	1113 12043 110664 110664	106
Number of fatal accidents	<b>∞</b> 10 10 01 01 00 01 01 1 1 1 1 1 1 1 1 1	24
Number of employes	1, 872 1, 613 1, 613 821 621 621 621 621 621 621 621 621 621 6	7,829
Number of days worked Not including washeries	253 254 254 255 254 255 255 255 255 255 255	233
Total production of coal in tons	944, 266 519, 266 519, 266 519, 266 52, 266 52, 170 52, 170 52, 170 53, 170 54, 166 56, 170 57	3,476,312
Number of tons sold to local trade and used by employes	21,670 5,622 3,669 12,856 12,856 1,987 1,987 1,987 2,881 2,881 2,881 2,881 2,881 2,881 6,891 6,801 6,8	55,010
Number of tons used for steam and heat at collieries	4, 500 1,	391,839
Number of tons of coal shipped by rail or otherwise	45.0 5.0 5.0 5.0 5.0 5.0 5.0 5.0 5.0 5.0	3,029,463
County	Schuylkill Schuylkill	
Names of Operators and Collieries	Lehigh Coal and Navigation Co.  Lehigh and Wikes-Barre Coal Co.  Lehigh and Wikes-Barre Coal Co.  Kill Creek Coal Co.  Cox Brothers and Co., Incorporated  Truman M. Dodson Coal Co.  Dodson Coal Co.  Beddall Brothers.  Dunkleberge and Young.  Battery Brothers  Stattery Brothers  Gorman and Campion,  William Cool.  Joseph H. Denning.  Joseph H. Denning.  Joseph H. Denning.  Joseph H. Denning.  Joseph H. Denning.  Joseph H. William Cool.  Joseph H. William Cool.  Joseph H. William Cool.  Joseph H. William Cool.  Joseph H. William Cool.  Joseph H. William Cool.  Joseph H. William Cool.  Joseph H. William Cool.  Joseph H. William Cool.  Joseph H. William Cool.  Joseph H. William Cool.  Joseph H. William Cool.  Joseph H. William Cool.  Joseph H. William Mayer and Co.	Totals,

TABLE 2-Continued

əpri	Total horse power  Number of pumps delive  Capacity in gallons per min  Quantity delivered to sur  per minute—gallons of sur  Number of electric dynamos	585 475 609 5 5 7.70 5.86 609 2.86 609 2.86 1.715 1.71	2.109 9 12.815 4,961 1	3,130 4 3,900 2,100 1,986 4 2,800 1,409	0 3,50	1,770 6 10,620 3,660 1 2,150 4 3,900 1,900	3.920   10 14,520   5,560 1	2,035 5 3,500 1,000 2 1,575 4 4,900 1,000	3,610 9 8,400 2,000 2	
Locomotives	Air Electric Number of steam engines of classes	25.12.2		11 8	19	14	33	-	38	6
l l	Horse power	668 1.668 800 1.514 1 465 1.667 2	533 6,449 3	820 1,820	2,990 3,490	700 2,820 850 2,515	3,550 5,335 8	İ	1,750 4,710 3	000 7
Number of Boilers	Horse power	16 1, 10 1, 202 14 1,	916 43 5,	500 14 1,	506 21 2,	15 1.	1,785 23 3,	1,760 4 1,200 5 1,	2.960 9 1.	000
Nui	tt ('y'lindrical	(f) (f) (f) (f) (f) (f) (f) (f) (f) (f)	64	cill, 20	20	dill, 32	19	ill, 32	52	F 6
	S County	Schuylk II Schuylk II Schuylk III Schuylk III		on Co. Schuylkill,		Schuylkill,		Schuylkill,		Schuylkill
	Names of Operators and Collieries	Lehigh Coal and Navigation Co. Colliery No. 8. Colliery No. 19. Colliery No. 10.	Totals,	Philadelphia and Reading Coal and Iron Silver Creek, Eagle Hill,	Totals,	Lehigh and Wilkes-Barre Coal Co. Audenried No. 4, Honey Brook No. 5,	Totals,	Mill Creek Coal Co. Fuck Mountain, Vulcan,	Totals,	Coxe Brothers and Co., Inc. Oneida Nos. 1, 2 and 3.

TABLE 2-Continued

Locomotives	Mumber of steam engines o classes  Total horse power  Number of pumps delive	12 1,560 2	20 1,170 4	8 230	10 140	7 115	2 75	2 60	2 42	3 20
Loc	Total horse power	,440	270	450 2	140	300	75 1	140	09	33
er.s	Horse power	1,440 1,	1,750 2,	450	140	300		140	09	15
Number of Boilers	raluduT'	12	17	2	က	2	1	61		
vumber	Horse power		520							18
	Cylindrical		24							
	County	Schuylkill,	Schuylkill,	Schuylkill,	Schuylkill,	Schuylkill,	Schuylkill,	Schuylkill,	Schuylkill,	Schuylkill,
1									:	:

No. 12	4.		,	THIR	TEENTH	ANTHRACITE DISTRICT	
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				58, 555		12. 915 6. 700 8. 4. 4. 50 7. 7. 7. 7. 7. 7. 7. 7. 7. 7. 7. 7. 7. 7	58, 555
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100	00	550	250	21,971	2-Recapitulation	1,1,2,1,1,2,1,2,2,2,3,3,3,3,3,3,3,3,3,3,	21,971
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				7,579	TABLE	2.1.7.55 2.1.7.55 2.2.0 8.80 8.80 8.80 1.1.1.1.1.1.1.1.1.1.1.1.1.1.1.1.1.1.1.	455.5
:				150		48E84 4 -	221
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Butcher Creek Coal Co.	Silver Hill,	Carson washery,	Washery,	Grand totals,		Lehigh Coal and Navigation Co., Philadelphia and Itadial of Co., Lehigh and Wilfes-Earre Coil Co., Mill Creek Coal Co., Coxe Bottlers and Co., Inc. Truman M. Ivelson Coal Co., Dodson Coal Co., Beddall Brothers, Unificher x and Young, D. She pp. Est. to. Slatter Brothers, Gierran and Cumpion, William Co.k. William Co.k. Check H. I. Penning, Butcher Treek Coal Coarson Coal Co. Pulling Rechers, Carson Coal Co. Smith, Meyer and Co.	Totals.

\*Formerly Juglar.

TABLE 3.—Thirteenth Anthracite District, 1903 Number of Each Class of Employes at Each Colliery

İ	Grand total inside and outside	563 284 540 485	1,872	756	1,313	747	1,615	421
	Total outside	181 98 200 189	899	289- 230	519	218	517	140
Employed Outside	All other employes	108 104 104 104	329	139 2	248 6	104 2	244	1 28
red 0			<u> </u>	22	123	22 16	1 22	03
nploy	Book-keepers and clerks				4	4464		
ns En	Slate pickers (men)	16 33 43 25 25	117	12.53	98	00	18	69
Persons	Slate pickets (boys)	53 83 5	133	52	112	73	149	63
of	Engineers and fremen	17 92 16	89	25	40	29	99	%
Occupations	Blacksmiths and carpenters	\$ 60 to 4	17	6.5	.18	37	37	∞
dnoa	nemerol ebistuO		7		0.7	120	9	
Ŏ	Superintendents					· ~	00	
	Total inside	382 186 340 296	1,204	467	794	529	1,098	281
side	All other employes	108 106 80	376	92 68	160	73 184	257	10
Employed Inside	Сотрану теп	86 65 76	272	38	77	80	141	30
mplo	Pumpmen	কলক	10	4	4	101	9	63
Persons E	Door-boys and helpers	61 81 841	51	4,00	7	13	22	, co
	Drivers and runners	44.488	132	17 17	46	28 16	44	22
ons of	Miners' laborers	16 29 29 29 29	12	102	176	146	265	8
Occupations	staniM	102 27 76 53	258	190	304	179	354	144
l oo l	Fire bosses and assistants	ರಿಚುಬರ	128	10	17	65 ==	4	-
	Assistant mine foremen	4401	10	- :	-	6.1	¢1	
	Mine foremen	01	13		¢1	27	e2	-
	County	Schuylkill, Schuylkill, Schuylkill, Schuylkill,		Schuylkill, Schuylkill,		Schuylkill, Schuylkill,		Schuylkill,
	Names of Operators and Collieries	Lehigh Coal and Navigation Co. Colliery No. 3. Colliery No. 12. Colliery No. 10. Colliery No. 10.	Totals,	P. and R. Coal and Iron Co. Silver Creek, Eagle Hill,	Totals,	Lehigh and Wilkes-Barre Coal Co. Audenried No. 4,	Totals,	Mill Creek Coal Co.  Buck Mountain,

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	6.1	60	-	-	-	-	-	-	1 =	-						
Schuylkill,		Schuylkill,	Schuylkill,	Schuylkill,	Schuylkill,	Schuylkill,	Schuylkill,	Schuylkill,	Schuylkill,	Schiylkill.	Schuylkill,	Schuylkill,	Schuylkill,	Schuylkill,	Sehuylkill,	
Vulean,	Totals,	Coxe Brothers and Co., Inc. Oneida Nos. 1, 2 and 3,	Truman M. Dodson Coal Co. Kaska William,	Dodson Coal Co.	Beddall Brothers Greenwood,	Dunkleberger and Young West Lehigh,	D. Shepp Estate East Lehigh,	Slattery Brothers Tuscarora,	Gorman and Campion Bell.	William Gook Oakley,	Joseph H. Denning Sebastopol,	Butcher Creek Coal Co. Laurel Run.*	Phillips Brothers Silver Hull,	Carson Washery,	Smith Meyer and Co. Washery.	All money of the second

\*Formerly Juglar.

# TABLE 3-Recapitulation

	Grand total inside and outside	11.873 1.615 1.615 1.615 1.813 1.823
side	Total outside	668 519 519 5282 5282 5284 5284 5284 5284 5284 5284
1 Outs	All other employes	229 2448 2448 2448 132 132 1449 16 17 47 17 47 17 47 17 18 18 18 19 10 10 10 10 10 10 10 10 10 10 10 10 10
Occupations of Persons Employed Outside	Book-keepers and clerks	**************************************
ıs Em	Slate pickers (men)	886 186 186 186 186 11 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
Person	Slate pickers (boys)	88111111111111111111111111111111111111
lo st	Engineers and firemen	834704408440844688688888888888888888888888
atior	Blacksmiths and carpenters	151 151 151 151 151 151 151 151 151 151
cap	Memerol ebistuO	ФЭРФОДЕНЕННЕН
ŏ	Superintendents	
	ebiani IstoT	1.204 1.0984 1.0988 202 202 202 202 202 204 4.698 4.698
side	All other employes	376 2557 257 78 78 50 50 8 8 8 8
Occupations of Persons Employed Inside	Company men	272 141 144 18 18 18 18 9 9
3mplo)	Ритртел	040404044
sons I	Door-boys and helpers	175 C 1 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4
of Per	Drivers and runners	132 446 444 444 111 111 122 123 136 136 136
ions	Miners' laborers	25.55 25.55
cupat	Minera	255 256 257 257 257 257 257 257 257 257 257 257
Ŏ	Fire bosses and assistants	\$2.740 :0001-FE   60
	Assistant mine foremen	12   12   12   12   12   12   12   12
	Mine foremen	26
	County	Schuykill. Schuykill. Schuykill. Schuykill. Schuykill. Schuykill. Schuykill. Schuykill. Schuykill. Schuykill. Schuykill. Schuykill. Schuykill. Schuykill. Schuykill. Schuykill. Schuykill. Schuykill. Schuykill. Schuykill.
	Names of Operators and Collieries	Lehigh Coal and Navigation Co Lehigh and Wilkes-Barre Coal Co. Lehigh and Wilkes-Barre Coal Co. Mill Creek Coal Co. Mill Creek Coal Co. Truman M. Dodson Coal Co. Bedaall Brothers Dunkleberger and Young, Slattery brothers, Slattery brothers, William Cook, William Cook, Flatting Coal Co. Flatting Coal Co. Flatting Coal Co. Flatting Bothers Butcher Creek Coal Co. Flitting Brothers Santh, Meyer and Co. Smith, Meyer and Co.

TABLE 3- Continued

Number of Days Worked Each Month in Breaker	June  Junember  September  September	25.7 23.4 22.1 21.6 19.2 18.9 19.9 265 21.6 20.0 22.8 21.6 19.2 18.7 18.6 20.0 20.6 20.6 18.3 18.5 19.5 24.8 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20	21.9 22.7 21.9 19.9 IS.7 IS.N 1N.1 253		25.7 25.2   25.9 18.6 14.1 15.1 16.8 254	20.8 23.1 21.2 10.9 10.8 16 16 230 23.8 15.2 21 20.1 15.7 16.8 2.8	21.8 23.2 15.2 20.2 20 15.8 16.4 207	22.2 22.5 20.5 10.6 16.6 16.9 22.8 22.4 22.4 21.2 20.9 19.4 17.4 1x 248	22.3 22.5 21.6 20.9 19.5 17 17.5 241	23 22 23 21 15 13 11 238	700 Tat Not 101 101 101 101
mber of Da	May	22.22 22.22 22.22 22.22 22.22 23.42 23.43	21.9	25.8 18 22.8	20.9 22.2	20.2	21.2   20.2	19 18 19.1 20.6	19.1	i9 21	8 06
Na	Магећ	15.22 1.5.51 1.5.52	20.3	83	25	6.55	17.6	19.1	19.8	55	14.6
	Pebruary	11.02.02 102.02	21.3	2121 2121	25.7	15.4	18.2	19.5	19.3	22	0
	January	0.000 F	25.3	25	25.5	4.63		21.8	22.1	-53	68
	County	Schuylkill, Schuylkill, Schuylkill,		Schuylkill,		Schuylkill		Schuylkill,		Schuylkill,	Schnylkill
	Names of Operators and Collieries	Lehigh Coal and Navigation (°o. Colliery No. 12. Colliery No. 10. Colliery No. 10. Colliery No. 10.	Averages,	Philadelphia and Reading Coal and Iron Co. Silver Creek, Eagle Hill,	Averages,	Lehigh and Wilkes-Barre Ceal Co. Audenried No. 4, Honey Brock No. 5,	Averages,	Buck Mountain,	Averages,	Coxe Brothers and Co., Inc.	Kaska William

TABLE 3-Continued

				A	vumber	Number of Days Worked Each Month in Breaker	s Work	ed Eacl	Month	in Bre	eaker			
Names of Operators and Collieries	County													
		January	February	Магей	lirqA	May	lune	July	rsugu4.	September	October	November	December	Totals
Morea, Sodson Coal Co.	Schuylkill,	97	20.8	14.7	19.7	21.8	21.6	21.6	20.6	21.3	17.3	17	20.6	243
Beddall Brothers  Greenwood,	Schuylkill,	27.3	22.8	6.19	24.6	24.3	52	25.6	25.6	23.5	7.5	23.7	23.9	202
Dunkleberger and Young West Lehigh,	Schuylkill,	25	55	19			21	23	13	275	17	16	13	199
D. Shepp Estate  East Lehigh,	Schuylkill,	25	21	124	18	18	139	30	21	16	53	19	21	239
Slattery Brothers  Tuscarora,	Schuylkill,	53	19	6	ଛ	21	24	24	21	20	17	21	21	240
Gorman and Campion Bell,	Schuylkill,	26	22	00		23	24	133	17	15	20	16	19	219
Oakley,	Schuylkill,	23	21	18	53	24	24	19	02	23	24	2.4	24	266
Sebastopol, Sebastopol,	Schuylkill,	24	18	25	22	25	20	25	24	94	38	22	25	277
Butcher Creek Coal Co.	Schuylkill,	91	16	10	6	22	24	23	8	18	133	133	19	222
Silver Hill, Silver Silver	Schuylkill,	27	25	             	22	14								108
Averages,		42	20.7	17.9	19.2	21.2	22.1	22.8	20.3	05	19.4	18.6	19.6	233

\*Formerly Juglar.

# TABLE 3-Recapitulation

	slatoT	\$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$	600
	<b>Т</b> өdтөээД	XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX	19.6
	November	X100 100 100 100 100 100 100 100 100 100	18.6
aker	TedotoO	8#552215548155488	19.4
ı in Bre	rodmetges	5.482212223352524X 6.666 8.55	50
h Month	August	5.519 8.56 5.518 5	20.3
Number of Days Worked Each Month in Breaker	July	អគ្គស្នួស្នា ក្នុងស្នួស្នួស្នួស្នួស្ន ក្សាស្រ្ត ទុំទ	23.8
s Worl	nne	55 59 59 55 55 55 55 55 55 55 55 55 55 5	99.1
of Day	May	23222222	61
Number	IirqA	818 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	19.2
-	March	6.871.841.184.8.8.78.9.9 6.871.841.184.8.8.78.9.9	0.11
	February	25, 25, 25, 25, 25, 25, 25, 25, 25, 25,	5.05
	lanuary	- 한원없정한점점점점점점점점점점점점 	24
	County	Schuylkill Schuylkill Schuylkill Schuylkill Schuylkill Schuylkill Schuylkill Schuylkill Schuylkill Schuylkill Schuylkill Schuylkill Schuylkill Schuylkill Schuylkill Schuylkill Schuylkill Schuylkill	
	Names of Operators and Collieries	Lehligh Coal and Navigation Co., Philadelphia and Reading Coal and Iron Co., Leblish and Wilkes-Barre Coal Co., Mill Creek Coal Co., Coxe Herchers and Co., Incorporated. Temman M. Deckson Coal Co., Deckson Coal Co., Deckson Coal Co., Deckson Coal Co., Deckson Coal Co., Deckson Coal Co., Milliam Each Fr., Dunkelberger and Young, Dr. Shept Estate Stattery Brothers, Coernen and Campion, William Coak, William Coak, Milliam	Averages,

TABLE 4.—Thirteenth Anthracite District, 1903 Fatal Accidents in and about the Mines

Nature and Cause of Accident in Brief	Suffocated by loose coal from breast blocking manway after a blast. Injured internally and died the same day. Knocked down and run over by mine	car on timber bank. Compound fracture of knee. Piece of rock fell on him. Died same day. Killed by being caught in rope sheave.	and car. Fatally injured, Caught between mine car and timber; body squeezed. Died same day.	Killed by a piece of slate falling on him in chute. Smothered in coal chute. Futally injured. Ignifed the gas by a blast and was thrown down an empty.	chute. Died at State Hospital May 10. Fatully injured. He was riding up the slype on empty car and was caught between the collar and car. Died same	day, by a fall of coal in breast. Killed by an explosion of gas, Killed by a fall of rock in breast. Killed by being caught on roller shaft. Killed by being caught on roller shaft. Killed by leing caught on shaker shaft. Killed by falling down the shaft. Killed by rock falling on him from side of the shaft.
County	Schuylkill, Schuylkill,	Schuylkill, Schuylkill, Schuylkill,		Schuylkill, Schuylkill, Schuylkill,	Schuylkill,	Schuylkill, Schuylkill, Schuylkill, Schuylkill, Schuylkill, Schuylkill, Schuylkill,
Name of Colliery	Silver Creek, Kaska William,	Honey Brook No. 5, Silver Creek,	Kaska William,	Fage Hill,	Buck Mountain,	Audenried No. 4,
Number of orphans	: :	: : :	:	. in	:	9 m i m im
wobiw to redminM		<u>:</u> ::		a :a	+	
Married or single	vi vi	vi vivi		Z Z	Ä	M.S.M.S.S.M.
93A	24	20 21 16	19	35 49	20	38 27 28 8
nottsquooO	Miner, Laborer,	Laborer, Engineer, Door boy,	Driver,	Miner, Slate picker Miner,	Miner,	Miner, Miner, Miner, Laborer, Oiler, Laborer, Rock man,
Vationali <b>ty</b>	Polish,	Slavonian,	American,	American, Polish,	Irish,	Lithuanian, Irish, Polish, Humarian, German, Polish,
Name of Person	Joseph Roskeveze, Stiney Poppel,	George Farish,  Robert G. Morgan, John Palf,	Charles Sharp,	Michael Battersby, Daniel Sweeney, Peter Skripco,	Michael Campbell,	Anthony Urban, Dennis O'Brien, Mike Washkill, Ludwig Kochalachik, William Spiedel, Frank Tolvíski, Thomas Williams,
Date of accident	Jan. 19	22 26 Feb. 28	March 11	14 May 7	19	June 9 22 29 29 July 6 4 Aug. 1

				,
American, Patcher, 20 S Oneda No. 6 slope, . Schuylkill, Killed by falling under a trip of cars	Weish, Miner, 38 M. 1 3 Morea, Schuylkill Killed by a fall of coal in gangway.  Hungarian, Laborer, 28 S. Bell C. Schuylkill Killed by premature blast in gangway.  American, Miner, 45 M. 1 2 Lehigh C, and N. Co. Schuylkill Fatally injured by an explosion of gas.	Hungarian, Footman. 18 S No. 10. Radenried, Carbon Killed by falling under car on plane. Slavonian, Laborer, 24 S Honey Brook, Schuylkiii, Sincheried by a rush of fine dirt and	Italian, Miner, 49 M. 1 6 Eloney Brook No. 5, Schuylkill, Walter,	
Schuylkill,	Schuylkill, Schuylkill, Schuylkill,	Carbon,	Schuylkill,	
Oneida No. 6 slope,	Morea, Bell, Lehigh C, and N. Co.	No. 10. No. 4 Audenried, Honey Brook,	Honey Brook No. 5,	
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Ť				
τά	Z W Z	w w	M.	
20	\$ 55.5	18	49	
<u>:</u>	: : :	::	:	
Patcher,'	Miner, Laborer, Miner,	Footman, Laborer,	Miner,	
American,	Welsh, Hungarian, American,	Hungarian,	Italian,	
Sept. 2 George Briggs,	27 Gomer Jones. 31 Emory Kowitch 18 Thomas Mitchel.	Martin Billin, 10 George Kovalick,	18 Frank Macaluse,	
61	27 31 18	10	18	
Sept.	Oct. Nov.	Dec.		

Non-Fatal Accidents in and about the Mines TABLE 5.—Thirteenth Anthracite District, 1903

Nature and Cause of Accident in Brief	Cut over the eye. Kicked by a mule. Skull injured. A piece of rock fell on him. Leg broken by fall of coal on strippings. Hands and face burned by gas. Back bruised. Fell down plane. Hand injured. Caught between friction	Side injured. Jumped off car on slope, Ankle bruised, Caught between coal and	Hip dislocated. Engine moved while he was	repairing machinery.  Leg broken, Caught by mine car while unbooking chain.	Ribs broken. Caught between dumper and piece of timber on strippings. Hands and face burned by gas.	Leg broken. Trece of coal folia Dat- tery and caught him on the leg. Leg bruised. Piece of coal rolled down	plane and struck him, Leg fractured. A lump of coal caught him	In the car while loading from chute.  Leg bruised by fall of coal and slate.  Head cut and bruised. Piece of rock caught	Head cut and bruised. Piece of rock caught	Figure against pinat. Ribs fractured. Strucks by coal from blast. Hands and face burned by gas. Hands and face burned by gas.
County	Schuylkill, Schuylkill, Schuylkill, Schuylkill, Schuylkill, Schuylkill,	Schuylkill, Schuylkill,	Schuylkill.	Schuylkill,		Schuylkill,	Schuylkill,	Schuylkill, Schuylkill,	Schuylkill,	Schuylkill, Schuylkill, Schuylkill,
• Name of Colliery	Audenried No. 4, On-ida No. 2, Morea, Buck Mountain, Audenried, Morea,	Audenried,	Audenried No. 4,	Audenried No. 4,	Honey Brook,	Audenried,	Greenwood,	Audenried, Silver Creek,	Silver Creek,	Buck Mountain, Lehigh C. and N. No. 10 Lehigh C. and N. No. 10
Married or single	w KEEKw	M.	νi	vi	vi ZZ		vi	ĭv.⊠	υż	KWKK
Age	22 22 33 40 16	50	. 20	. 24			45	45.	48	2004 9004 9004
Occupation	Driver, Miner, Laborer, Miner, Tipman,	Miner,	Engineer,	Footman,	Driver,	Footman,	Loader,	Miner,	Miner,	Miner, Miner, Miner,
Vationality	Hungarian, Austrian, Polish, Polish, Hungarian, American,	Polish,	American,	Hungarian, .	American,	Magyar,	American,	American,	Polish,	Hungarian, Lithuanian, Irish,
Name of Person	Stanley Olman, Joseph Colognie, Anthony Shappela, Stiney Labonsky, George Posther, John Bowers,	Joseph Nalis,	James McGinley,	Michael Meehala,	William Hitchens,	John Olman,	耳ugh Gatins,	Charles Crouse, Joseph Berkofski,	Joseph Youtsus,	Andrew Kushok, Michael Kollesor, Joseph Carr, Frank Boyle,
Date of accident	Jan. 2 6 10 10 12 12 12	15	17	19	21.	26	26	Feb. 3	9	. 122

Feb. 14         John Bassler         American.         Miner.         46         M. Kaska William         Schuykill.         Back Injured by premature explosion of control of con	ĵo	Je J	al	ate.		- 60	ıt	- s		100	u u	11	v. <u>1</u>	p.	n	16	1t	Jo	E	JC
14 John Bassler         American         Miner         46         M. Kaska William         Schuylkiii         Back Buylkii         Schuylkiii         Back Buylkii         Schuylkiii         Back Buylkii         Schuylkiii         Back Buylkii         Schuylkiii         Back Buylkii         Back Bu					1 fro	alon	l. ng ou	timbe	onlde	II from		ng fe	e car	trip.	etwee	off th	rock		plosia	sion o
14 John Bassler         American         Miner         46         M. Kaska William         Schuylkiii         Back Buylkii         Schuylkiii         Back Buylkii         Schuylkiii         Back Buylkii         Schuylkiii         Back Buylkii         Schuylkiii         Back Buylkii         Back Bu	soldxe	tween		fall or eaker of co	f coa	lipped	f coa	way it ou	nd sh	ok fel	ruck	casti	gas.	aded n mu		-	Jo a	explo	=	explo
14 John Bassler,         American.         Miner,         46 M. Kaska William.         Schuykill.         Back injured.         Caught and Caugh and				gas, wn br fall	gas. gas. al.	=			ad a	of ro	him. A t	him. netal	tweel on of tweel	a los	('au	coal	piec	an an	***	an
14         John Bassler         American         Miner         2         S. Audenried         Schuylkill           24         Andrew Olinski         Lithuanian         Miner         2         S. Audenried         Schuylkill           25         Stantew Olinski         Lithuanian         Miner         2         S. Audenried         Schuylkill           25         Stantew Olinski         Linnsgrian         Miner         2         S. Audenried         Schuylkill           26         Stante Volus         Illusprian         Janoset         Super         Schuylkill         Schuylkill           26         Anak Sanakey         Polish         Miner         2         M. Buck Mountain         Schuylkill           27         Jane         Miner         2         M. Buck Mountain         Schuylkill           28         Alcher Stankey         Polish         Miner         2         M. Honey Brook         Schuylkill           27         Jane Sankey         Miner         2         M. Honey Brook         Schuylkill           28         Alcher Stankey         Miner         2         M. Honey Brook         Schuylkill           27         John Galagher         Polish         Warchman         Schuylkill         <	emat	augh		nd curred by grant by	ed by ed by of cos by ru	of co	t hin by ed w	oilers. of unloa	ut he	iper	ruck tred.	Levo :	ed be	nt on	med.	ice in	ing a	f clod	I of in j	ed by
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14         John Bassler,         American,         Miner,         46         M. Kaska William,           24         Andrew Olinski,         Lithuanian,         Miner,         25         S. Audenried,           25         Stanley Worss,         Polish,         Miner,         25         S. Kaska William,           16         Stanley Wyers,         Polish,         Miner,         25         S. Kaska William,           10         Clouze Clace,         Polish,         Miner,         25         S. Kaska William,           13         Alex, Kinkus,         Polish,         Miner,         25         S. Kaska William,           13         Frank Stankey,         Polish,         Miner,         25         S. Kaska William,           14         Albory Gallagher,         Polish,         Miner,         25         M. Honey Brook,           27         John Gamboski,         Polish,         Miner,         25         M. Honey Brook,           27         John Gamboski,         Polish,         Winter,         25         M. Honey Brook,           27         John Gamboski,         Polish,         Miner,         25         S. Hacka William,           27         John Gamboski,         Polish,         Miner, <td< td=""><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td>-</td><td>-</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></td<>											-	-								
14         John Bassler,         American,         Miner,         46         M. Kaska William,           24         Andrew Olinski,         Lithuanian,         Miner,         25         S. Audenried,           25         Stanley Worss,         Polish,         Miner,         25         S. Kaska William,           16         Stanley Wyers,         Polish,         Miner,         25         S. Kaska William,           10         Clouze Clace,         Polish,         Miner,         25         S. Kaska William,           13         Alex, Kinkus,         Polish,         Miner,         25         S. Kaska William,           13         Frank Stankey,         Polish,         Miner,         25         S. Kaska William,           14         Albory Gallagher,         Polish,         Miner,         25         M. Honey Brook,           27         John Gamboski,         Polish,         Miner,         25         M. Honey Brook,           27         John Gamboski,         Polish,         Winter,         25         M. Honey Brook,           27         John Gamboski,         Polish,         Miner,         25         S. Hacka William,           27         John Gamboski,         Polish,         Miner, <td< td=""><td>huylk</td><td>nuylk</td><td>huylk</td><td>nuylk nuylk nuylk nuylk nuylk</td><td>nuylk nuylk nuylk nuylk</td><td>huylk</td><td>huylk</td><td>nuylk</td><td>nuylk</td><td>nuylk</td><td>nuylk</td><td>nuylk</td><td>nuylk nuylk nuylk</td><td>nuylk</td><td>nuylk</td><td>nuylk</td><td>nuylk</td><td>nuylk</td><td>nuylk nuylk nuylk</td><td>nuylk</td></td<>	huylk	nuylk	huylk	nuylk nuylk nuylk nuylk nuylk	nuylk nuylk nuylk nuylk	huylk	huylk	nuylk	nuylk	nuylk	nuylk	nuylk	nuylk nuylk nuylk	nuylk	nuylk	nuylk	nuylk	nuylk	nuylk nuylk nuylk	nuylk
14         John Bassler,         American,         Miner         45         M. Kaska William,           24         Andrew Olinski,         Lithuanian,         Olier,         21         S. Auderried,           25         State Volume,         Lithuanian,         Miner,         27         S. Kaska William,           25         Stankey Myers,         Polish,         Miner,         28         S. Kaska William,           26         Punk Stanskey,         Polish,         Miner,         28         S. Raska William,           27         Stankey Stanskey,         Polish,         Miner,         28         S. Raska William,           28         Anthony Galinski,         Polish,         Miner,         28         S. Raska William,           27         Anthony Galinski,         Polish,         Miner,         28         S. Honey Brook,           28         Anthony Galinski,         Polish,         Miner,         38         M. Honey Brook,           29         Anthony Stanke,         Polish,         Miner,         39         M. Honey Brook,           20         Anthony Stanke,         Polish,         Miner,         39         M. Honey Brook,           21         John Gamboski,         Polish,         Miner,	. Sc.	. Sc	Sc	~		Sc.			. Se	Sc]	. Sc.	Sc.		Sel	Sc.	Sc		-	 8.8.2.8.8.	- Sc
14         John Bassler         American         Miner         46         M. Kaska William           24         Andrew Olinski         Lithuanian         Oiler         24         S. Audenried           25         Stanley Myers.         Polish         Miner         27         S. Kaska William           25         Stanley Myers.         Polish         Miner         28         S. Neak Mountain           10         Ponoms O'Conneil         Iningarian         Jiner         28         S. Raska William           11         Ponoms Cales         Iningarian         Jiner         28         S. Raska William           12         Anthorne Cales         Iningarian         Miner         28         S. Raska William           13         Anthorne Cales         Polish         Miner         28         S. Raska William           14         James Mack         Polish         Miner         28         S. Honey Brook           15         James Mack         Polish         Watchman         28         S. Honey Brook           16         James Mack         James Mack         James Mack         James Mack         James James         James James           27         James Soata         James James         James James </td <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td>ı.a</td> <td></td> <td></td> <td></td> <td>:</td> <td></td> <td></td> <td>:</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td>							ı.a				:			:						
14 John Bassler,         American,         Miner,         46         M.           14 Michael Unto,         Hungarian,         Oiler,         24         S.           24 Andrew Olinski,         Lithuanian,         Miner,         27         S.           25 Stanley Myers,         Hungarian,         Miner,         27         S.           10 Oroze Clace         Immgarian,         Miner,         29         M.           11 Oroze Clace         Immgarian,         Miner,         29         M.           12 Stank Sainskey,         Polish,         Miner,         29         S.           27 Anthony Gallagher,         Polish,         Miner,         30         M.           27 James Mack,         Irish,         Miner,         31         S.           28 Frank Gallagher,         Irish,         Miner,         32         S.           29 Frank Gallagher,         Irish,         Miner,         32         S.           31 Michael Sartori,         Irish,         Miner,         33         M.           4 James Mack,         Lithuanian,         Laborer,         32         S.           5 James Alman,         Hungarian,         Miner,         30         M.           5 Wi	am,		am,	ain.	ain, ain,	:	ain. No.	21H1,	1,	am,	0.4	4.	am,			:			<del>-</del>	
14 John Bassler,         American,         Miner,         46         M.           14 Michael Unto,         Hungarian,         Oiler,         24         S.           24 Andrew Olinski,         Lithuanian,         Miner,         27         S.           25 Stanley Myers,         Hungarian,         Miner,         27         S.           10 Oroze Clace         Immgarian,         Miner,         29         M.           11 Oroze Clace         Immgarian,         Miner,         29         M.           12 Stank Sainskey,         Polish,         Miner,         29         S.           27 Anthony Gallagher,         Polish,         Miner,         30         M.           27 James Mack,         Irish,         Miner,         31         S.           28 Frank Gallagher,         Irish,         Miner,         32         S.           29 Frank Gallagher,         Irish,         Miner,         32         S.           31 Michael Sartori,         Irish,         Miner,         33         M.           4 James Mack,         Lithuanian,         Laborer,         32         S.           5 James Alman,         Hungarian,         Miner,         30         M.           5 Wi	Willia	ed,	Willia	ounts reek, No.	fount fount ed, Brool	Brool	Count	Willis		Willia	ed N		A HILL	HIII,	:	reek.	ed N	EE,	reek, ed N	, poq
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14         John Bassler,         American,           13         Michael Unto,         Hungarian,           24         Andrew Olinski,         Lithuanian,           25         Stanley Myers,         Polish,           10         Paul Crobse,         Hungarian,           11         Prank Stanskey,         Polish,           12         Alex. Kinkus,         Polish,           13         Anthony Galinski,         Polish,           14         Prank Galiagher,         Prish,           15         Frank Galiagher,         Prish,           16         Frank Galiagher,         Prolish,           17         Jumes Mack,         Polish,           27         Michael Sartori,         Lithuanian,           27         Janes Mack,         Polish,           28         Jere Rowan,         American,           3         Jere Rowan,         American,           4         Jere Rowan,         American,           5         William Waters,         German,           5         William Thomas,         American,           6         John Sturginski,         Polish,           5         Steven Beirshan,         Mayear,	:	:	:				::	:-	:		:	:			:	:	:	::	: : :	<u> </u>
14         John Bassler,         American,           13         Michael Unto,         Hungarian,           24         Andrew Olinski,         Lithuanian,           25         Stanley Myers,         Polish,           10         Paul Crobse,         Hungarian,           11         Prank Stanskey,         Polish,           12         Alex. Kinkus,         Polish,           13         Anthony Galinski,         Polish,           14         Prank Galiagher,         Prish,           15         Frank Galiagher,         Prish,           16         Frank Galiagher,         Prolish,           17         Jumes Mack,         Polish,           27         Michael Sartori,         Lithuanian,           27         Janes Mack,         Polish,           28         Jere Rowan,         American,           3         Jere Rowan,         American,           4         Jere Rowan,         American,           5         William Waters,         German,           5         William Thomas,         American,           6         John Sturginski,         Polish,           5         Steven Beirshan,         Mayear,				: : : : : : : : : : : : : : : : : : :		:			:	:	:	:			:	:				
14         John Bassler,         American,           13         Michael Unto,         Hungarian,           24         Andrew Olinski,         Lithuanian,           25         Stanley Myers,         Polish,           10         Paul Crobse,         Hungarian,           11         Prank Stanskey,         Polish,           12         Alex. Kinkus,         Polish,           13         Anthony Galinski,         Polish,           14         Prank Galiagher,         Prish,           15         Frank Galiagher,         Prish,           16         Frank Galiagher,         Prolish,           17         Jumes Mack,         Polish,           27         Michael Sartori,         Lithuanian,           27         Janes Mack,         Polish,           28         Jere Rowan,         American,           3         Jere Rowan,         American,           4         Jere Rowan,         American,           5         William Waters,         German,           5         William Thomas,         American,           6         John Sturginski,         Polish,           5         Steven Beirshan,         Mayear,	:	:	:	er, picke	i i i	·r, .	man,	. 17.	:	· r.	· r.	nist,		:	:	:	er, .	: :	nner,	
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Marc May May		14	24		18 18 18 27	27		27	27	30	ro	1.0	66 5	13	13	18	23	255		18
	Feb.			Marc			April				May								June	

TABLE 5-Continued

Nature and Cause of Accident in Brief		Hurt internally. Knocked down and run	over by loaded mine car. Hands and face burned by an explosion	of	rock fell off face of tunnel.  Laceration of head and back. A piece of	rock fell off face of tunnel. Hip broken by a fall of top coal. Hands and face burned by an explosion of	gas. Face, hands and breast cut by premature	explosion of a blast, Hands and face burned by an explosion of	gas. Leg injured by a rock rolling down the	strippings. Hands and face burned by an explosion of	gas. Hands and face burned by an explosion of	gas. Head and body bruised by a piece of rock	falling on him from side of shaft.  Head cut by a piece of rock falling from	side of shaft.  Head cut and knee cap split by a fall of	rock from side of shaft.  Face and hands burned by an explosion of	gas. Hands burned by an explosion of gas. Two ribs broken by a piece of coal falling	on him.  Leg broken. Struck by a piece of switch rod, broken by trailing coupling.
County		Schuylkill,	Schuylkill,	Schuylkill,	Schuylkill,	Schuylkill, Schuylkill,	Schuylkill,	Schuylkill,	Schuylkill,	Schuylkill,	Schuylkill,	Schuylkill,	Schuylkill,	Schuylkill,	Schuylkill,	Schuylkill, Schuylkill,	Schuylkill,
Name of Colliery		Honey Brook No. 5,	Lehigh C. and N. No. 8	Audenried No. 4,	Audenried No. 4,	Vulcan, Buck Mountain,	Lehigh C. and N. Co.		No. 8. Honey Brook No. 5,		Lehigh C. and N. Co.	Kaska William,	Kaska William,	Kaska William,	Audenried No. 4,	Audenried No. 4,	Honey Brook No. 5,
elgnis to bei	Mari	vi	M.	M	M.	Z.S.	υż	M.	M.	M.	σż	M.	υż	M.	M.	M.M.	M.
	-S&A	22	37	32	30	35	24	52	42	28	24	37	8	31	28	88 88	31
noitsq	nooO	Driver,	Miner,	Rock man,	Rock man,	Laborer,	Miner,	Miner,	Laborer,	Miner,	Laborer,	Assistant machine	Assistant machine	Laborer,	Miner,	Laborer,	Laborer,
onality	iteN	American,	Irish,	Irish,	English,	Lithuanian,.	American,	Irish,	Magyar,	American,	·American,	American,	American,	American,	Polish,	Polish,	Italian,
Name of Person		Lawrence Donlin,	Daniel Collins,	Roger McCoy,	Thomas Argust,	William Cominsky, John Batchko,	John Bechtel,	Daniel O'Donnel,	Gobin Shillish,	William L. Williams,	Charles Eisenburg,	Patrick McFadden,	Anthony Phchiler,	James Kellegher,	Frank Tomesaski,	Mike Ematta,	Frank Karose,
		22	22	22	22	29	6	ಣ	17	17	17	19	19	19	31	<b>#</b> #	-
e of accident	Dat.	June				July		Aug.									Bept.

Back and hip injured by a fall of coal from	by .	Car jumped th	the legs fell on him.  Laceration of right leg. Fell along	the track and wheel caught him. Collar bone broken. Empty car jump track and caught him seans:	wrist cut. Fell against coal on a	of gangway. Face cut. Kicked by a mule. Leg broken by a fall of top coal in bree. Hand and face hurned by but steam.		by a	gas. Hand and face burned by an explosion of	gas. Leg injured. (aught by the wheel of the	Struck in the eye wit	of his pick. Hands and face burned by an explosion of	by an	gas. Hip bone broken, Caught between the	trip of mine cars.	with	an explos	p(		ds burned by an explosion	twe	and hitching pl Back injured. A	in gangway. Left side injured. Six dynamite caps ex-	ploded in his vest pocket.  Head and neck burned by an explosion of gas.
Schuylkill,	Schuylkill,	Schuylkill,	Schuylkill,	Schuylkill,	Schuylkill,	Schuylkill, Schuylkill, Schuylkill,	Schuylkill,	Schuylkill,	Schuylkill,	Schuylkill,	Schuylkill,	Schuylkill,	Schuylkill,	Schuylkill,	Schuylkill,	Schuylkill,	Schuylkill,	Schuylkill,	Schuylkill,	Schuylkill,	Schuylkill,	Schuylkill,	Schuylkill,	Schuylkill,
Kaska William,	Eagle Hill,	Vulcan,	Honey Brook No. 5,	Silver Creek,	Honey Brook No. 5,	Honey Brook No. 5, Oneida No. 2, Kaska William,	Audenried No. 4,	Buck Mountain,	Buck Mountain,	Kaska William,	Silver Creek,	Lehigh C. and N. Co.	Lehigh C. and N. Co.		No. 8. Oneida No. 2,	Eagle Hill,		Audenried No. 4,	Kaska William,	Lehigh C. and N. Co.	No. 10. Kaska William,	Kaska William,	Silver Creek,	Kaska William,
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48	30	20	42	20	27	34	40	28	27	20	20	46	37	42	44	17	42	26	18	30	22	35	34	¢1
Miner,	Miner,	Driver,	Footman,	Plane man,	Gang laborer,	Driver, Miner, Miner,	Laborer,	Miner,	Brattice man,	Runner,	Miner,	Miner,	Miner,	Laborer,	Miner,	Platform man,	Miner,	Laborer,	Laborer,	Miner,	Driver,	Laborer,	Miner,	Miner,
German,	Hungarian, .	American,	Russian,	Polish,	Russian,	Hungarian,	Polish,	American,	American,	American,	American,	Irish,	Irish,	Hungarian, .	Austrian,	Hungarian, .	Welsh,	Polish,	American,	American,	Polish,	Polish,	Polish,	Polish,
3 George Geigler,	Joseph Bocleo,	Bryan Tansey,	John Buckshot,	Joseph Laskus,	Paul Riffon,	Andrew Patician, John Honula, Jerry McDonald,	Joseph Karnoski,	Maurice Friel,	Michael McNiff,	22 John Shields,	Moses Finley,	John D. Melley,	Manus Breslin,	Mike Petecovitch,	Simon Sambotti,	Peter Clauser,	John Williams,	John Petock,	Mike Kihe,	18 ; James Mulligan,	20   Leo Burket,	Paul Bender,	Simon G. Krovanis, .	William Mulehky,
Ge										Joh			Mai	Mik	Sim		Joh			Jan	Leo		Sim	Will
	10	14	16	17	18	21 21 10	13	14	14	22	23	26	36	Si	101	28	C1	4	111	15	961	30		4.
Sept.						Oct.											Nov.						Dec.	

TABLE 5-Continued

518

Nature and Cause of Accident in Brief	Schuylkill, Hands and face burned by an explosion of gas.  Schuylkill, Hands and face burned by an explosion of gas, schuylkill, Per injured. Struck by a spike flying from an ax.  Schuylkill, Compound fracture of the leg. Struck by a piece of coal in breast.  Schuylkill, Cheeve and head burned by an explosion of gas.  Schuylkill, Face and head burned by an explosion of gas.
County	Schuylkill, Schuylkill, Schuylkill, Schuylkill, Schuylkill, Schuylkill,
Name of Colliery	S. Silver Creek, Schuylkill, S. Silver Creek, Schuylkill, M. Buck Mountain, Schuylkill, M. Kaska William, Schuylkill, S. Kaska William, Schuylkill,
Married or single	
93A	35 25 26 26 42
Occupation	Polish,       Miner,       35         Polish,       Miner,       25         Polish,       Laborer,       26         Polish,       Jig runner,       14         Polish,       Miner,       42
Vationality	
Name of Person	Andrew Brozofski, Peter Brozofski, Anthony Rodomanis, Hugh O. Donnel, Joseph Huboski, Mike Burkot,
Jase of accident	Dec. 5 12 12 23 23 31

### FATAL ACCIDENTS

### By Falls of Coal, Slate and Roof

January 9. Anthony Urban, miner, killed at Audenried, No. 4. He had fired three holes across the face of the breast the evening before. It appears the shots only sprung the coal and did not blow it down. When he went into the breast the next morning, he stood in the centre of it and started to trim the loose coal down. When he took one lump out of the centre, the whole mass fell on him, killing him instantly.

January 22. George Farish, laborer, Honey Brook No. 5. He was laboring for miners who were opening up a traveling way through an old breast and they were close to the surface, coming in a breach hole. The sand rock in the top lay in joints, and a piece fell from between two of the props which they had just stood and caught Farish against a prop, injuring him severely. He died in the State Hospital at Hazleton the same day.

March 14. Michael Battersby, miner, Eagle Hill. He was robbing the East Skidmore vein and one of his partners was taking out the stump between the monkey beading and the gangway. There was a piece of top slate hanging and he tried to get it down but failed. Battersby came to his assistance and started to take more coal from under it, weakening it. He had worked but a few minutes, when it fell on him, killing him.

June 29. Mike Washkill, miner at Silver Creek. He was working breast No. 11, east bottom bench, No. 3 plane. He had finished his day's work and was walking down the centre of the breast over the gob (the vein pitches 20 degrees) and a piece of slate fell from the top and injured him severely. He died on the way home.

August 19. Thomas Williams, shift leader in new shaft, Kaska-william Colliery. Was killed by a fall of rock from the side of the shaft. The shaft had been idle for four or five weeks, owing to a fire in another section of the mine. When the shaft resumed work, the leaders of each shift were warned to examine the sides of the shaft, to see that there was no loose rock on them. From the evidence on the inquest, he (Williams) did examine the shaft and pronounced it safe. The timber was back 29 feet from the bottom. Behind the last set of timber, there was some loose rock that may have escaped his notice. When he fired his first round of shots, it disturbed this rock. They were in the act of loading the bucket, when it fell down and killed Williams and severely injured his three laborers.

October 27. Gomer Jones, miner, killed at Morea. He was making room for a set of timber at the face of the gangway and had fired a shot in the top coal on the low side. This loosened a piece of

coal in the centre of the gangway and when he went to dress the coal down to make room for the collar, this piece of coal fell on him and killed him.

December 18. Frank Macaluse, miner. Breast No. 13, East Lykens vein, new tunnel No. 8 strippings. This man had worked three or four days in this breast and the face was about fourteen feet away from the timber, which had been set by the chute men. The drilling a hole in the face of the breast and the top slate commenced vein carries a slate top and is considered pretty good. He was to work. He heard it and made an effort to get to the monkey heading. He had not gone more than six feet when a piece of slate four feet long, three feet wide and from three to four inches thick, fell on him and killed him.

### By Cars

January 20. Stincy Poppel, inside laborer at Kaskawilliam Colliery. He was going out to work on the night shift and a loaded car was coming down from the top of the shaft by gravity. He had his back turned to it, going towards the timber bank. Those who saw the danger he was in, shouted at him to get out of the way, but he did not understand the language and paid no attention to them. The car struck him and rolled him under it along the track, killing him. Had he worked this shift, it would have been the second he worked in this country.

February 28. John Palf, door boy, Oneida No. 1. He was riding on the front of the trip with the driver, standing on the bumper, on the high side. The platform of the breast extends outside the line of the timber. He must have pushed his body out of line with the car, and was caught between it and the platform. He was injured severely and died March 3.

March 11. Charles Sharp, driver, Kaskawilliam. He was driving to the bottom of the shaft and was coming out with a loaded trip and was caught between the timber on the high side of the gangway. Was injured severely and died the same day.

May 19. Michael Campbell, miner, Buck Mountain Colliery. He was riding up the slope on a trip of empty cars, and at a point on the slope, where the timber was low, he was caught and pulled out of the car. He was riding in the first car and when he fell out, the last car of the trip passed over his body. He was severely injured and died at his home twelve hours afterwards.

September 2. George Briggs, patcher on locomotive No. 19; hauling the coal from No. 6 slope to Oneida breaker. Killed by falling between the mine cars. He stood along side of the track to let the trip pass in order to set the switch. After setting the switch, he

got on the last car of the trip. The cars travel at a lively speed along this piece of track and he started to walk along the top of the cars and fell between them. The last half of the trip passed over his body and killed him.

December 10. Geo. Kovalick, laborer at Green Mountain, slope No. 5, Honey Brook. Smothered by a rush of fine dirt and water while loading a car out of No. 9 breast, East Lykens vein, north dip. The vein is at an angle of 75 to 80 degrees, and in order to make it convenient to load the cars, they have a check battery five to six feet above the line of the collars in the gangway. This battery turns the coal to a battery at righ angle to the pitch. From this battery, there is a short chute that drops the coal down into the cars through a square hole 2x2 inches. There is another hole of the same size between the next set of timber, that acts as a traveling way to get up and down to load the cars. When he started the check battery, the water that was held back by the fine dirt, made a rush, together with the fine dirt and blocked the first hole. He must have got excited and made an effort to get through the second hole and got fast in it. The dirt rushed over on top of him, and before assistance came to him, he was smothered. If he had remained standing or stepped back a few feet, he would have been safe.

### By Cars

December 5. Martin Billin, outside laborer at No. 2 south stripping, Audenried No. 4. He was employed as foot man at the plane where the rock is hoisted from the strippings. He got on the rock dumper to ride up to the blacksmith shop, which is situated near the top of the plane. When getting off the dumper, he slipped and fell under it, and was instantly killed.

### By Explosion of Gas

May 7. Peter Skripco, miner, Silver Creek. He was working in breast No. 28, west top bench, 4 section, No. 3 plane. He fired a blast in the face of No. 28 breast, which blew into a heading that was driven from No. 29 breast. Gas had accumulated in the heading and the shot ignited it. Skripco was standing in the monkey heading, 50 feet away, and the concussion threw him down the empty chute, injuring him severely. He died on May 10th in the State Hospital at Fountain Springs.

June 22. Dennis O'Brien, miner, killed by an explosion of gas at No. 8 colliery, Lehigh Coal and Navigation Company. He was working in stump breast No. 11, east bottom bench, lower lift. He was going up the manway in the morning with a naked lamp on his head and a fall of coal brought the gas down on it. The gas ignited and

burned him severely. He was injured otherwise by being thrown down the manway. He died the same day.

November 18. Thos. Mitchell, miner, fatally injured by an explosion of gas at No. 10 colliery, Lehigh Coal and Navigation Company. This man was working in breast No. 3, east forty foot vein new tunnel. He was cutting back through the benches to the top slate and was back about twenty feet. The vein had fallen to a considerable height over the face of the breast, and gas had accumulated in this hole. He was working with a naked lamp, when a fall of coal came from this point and brought the gas down on his lamp. It ignited and he was burned severely and injured otherwise by being thrown down the chute. He died at the Miners' Hospital, November 23.

### Suffocation by Gas

January 19. Joseph Roskeveze, miner, Silver Creek. He was prepairing a blast, and when he was ready to fire it, his partner went down the inside manway and advised him to go down the outside manway to the monkey or main headway. He ignited the fuse and went into a blind headway, 20 feet from the face of the breast. After the shot exploded, large quantities of coal were liberated. The loose coal rushed down the manway. He no doubt was expecting it to cease running and he remained until the manways got blocked, preventing the air to circulate, and allowing the gas to accumulate, suffocating him.

### By Machinery

January 26. Robert Morgan, breaker engineer, Silver Creek. He, with several others, was making repairs of the machinery in the breaker, after quitting time. When they completed their work and were preparing to go home, Morgan went to examine some sheave wheels or to put on a rope on the sheave when the machinery was started without warning him and he was caught by the sheave wheels and killed.

July 23. William Spiedel, oiler, killed in Buck Mountain breaker. The last seen of this man was at 11.30 A. M. When he did not make his appearance at his usual place at dinner time, they made a search for him and found him dead with his clothes wrapped around the shaker shaft. The indications were that he put his arm in to put oil on the journal of the shaker shaft and was caught by a set screw which was on the shaft close to the journal.

### By Falling Down Shafts, Slopes, Etc.

August 1. Frank Tolofski, laborer at Morea. He was helping to clean out the sump at the bottom of the shaft. He got on the cage

and the bottom man signalled to the engineer to hoist him to the first lift, a distance of 88 feet. He (Tolofski) got off the cage and signalled the engineer to let the cage back to the bottom, which he did. Shortly afterwards Tolofski was found dead at the bottom of the shaft.

### By Blasts

October 31. Emory Kovitch, laborer, killed at Bell Colliery. He was laboring in the gangway. He and the miner drilled three short holes to make room to shift the road to the high side of the gangway. They charged two of the holes and fired them. The miner went back some distance to look after the mule they were working (it being on the night shift). He told Kovitch to sit down until he came back. He (Kovitch) went into the gangway, charged the remaining hole and in igniting the fuse the blast exploded, injuring him severely. He died in the Miners' Hospital at Fountain Spring, November 8.

### Suffocated by Coal

March 31. Daniel Sweeney, slate picker, was smothered in a coal chute at the Carson Coal Company washery. He and four other boys were playing in the coal pocket. The car loaders started to draw the coal and two of them were carried down with the coal and before Sweeney could be rescued, he was smothered. The other boys escaped.

### Miscellaneous

July 6. Ludwig Kochalachik, outside laborer, No. 8, Lehigh Coal and Navigation Company. This man's duty was to keep the coal moving in a chute leading from one screen to another. He was working by himself, no other person being at work close to him to give an account of how the accident occurred. There was a hose hanging upon the side of the building, put there for the purpose of putting water on a roller journal that got hot occasionally. It would appear that he took the hose down, for what purpose no one can tell. When found, he was dead, lying under the shaft with the hose wrapped around the shaft.

### Condition of Collieries

### COXE BROTHERS AND COMPANY, INCORPORATED

Nos. 1 and 3. The drainage and haulage are in excellent condition; the ventilation is fair. Small quantities of gas are found occasionally in No. 1, but none has been found in No. 3. On my first visit to No. 4, the ventilation was poor. With the installation of a new 20 foot fan, on my second inspection, the ventilation was good. Drainage and haulage were in fine condition.

### LEHIGH AND WILKES-BARRE COAL COMPANY

No. 5, Honey Brook. The coal of this colliery is brought from several sections: From Green Mountain, a distance of four miles, where it is partly prepared in a small breaker, built for that purpose; from Green Mountain water level tunnel; from No. 15 slope; No. 8 tunnel; No. 10 north stripping; West Shore stripping; No. 8 south stripping, and No. 8 south extension stripping. There has been a continual improvement in the sanitary condition of this colliery in the past year.

No. 4, Audenried. To this colliery coal is brought from No. 4 slope, No. 11 slope, No. 16 slope, No. 12 slope, No. 1 W. A. stripping, and No. 2 south stripping, Treskow. The drainage and haulageway are in fine condition. The ventilation is fair, and the officials are making every effort to improve it.

### DODSON COAL COMPANY

### Morea Colliery

There has been a slight improvement in the ventilation of this colliery in the past year, but the drainage is not what it might be. The conditions surrounding the colliery make it hard to keep it up to the standard in drainage.

### MILL CREEK COAL COMPANY

### Buck Mountain Colliery

The ventilation and drainage from the third level down to the sixth are in fair condition. On the third level in my last inspection, the ventilation was very poor. Since then they have installed a new 16 foot fan, and I expect to find better ventilation and a general improvement in the sanitary condition on my next visit.

### Vulcan Colliery

A new 25 foot fan has been installed at the colliery in the past year, but it has not brought the ventilation up to the standard that was expected. The ventilation is not what it should be, especially on the third level. I expect to be able to give a more favorable account in my next year's report.

### PHILADELPHIA AND READING COAL AND IRON COMPANY

### Eagle Hill Colliery

The ventilation and drainage of this colliery are in fair condition, with the exception of Skidmore vein. Here they are driving an air

tunnel from the monkey heading in Skidmore vein to the monkey heading in the bottom bench of the Mammoth. It was driven 50 feet in my last visit and it will require to be driven 50 feet more to connect the two veins. This will improve the ventilation in this section.

### Silver Creek Colliery

The ventilation and drainage of this colliery are in fair condition. The officials are making special efforts to keep it up to the standard.

### TRUMAN M. DODSON COAL COMPANY

### Kaskawilliam Colliery

The ventilation of this colliery is in fair condition. The drainage is not up to the standard, but the officials have promised to put it in good condition immediately.

### Greenwood Colliery

The condition of this colliery is fair. The principal work is robbing.

### LEHIGH COAL AND NAVIGATION COMPANY

Nos. 8, 12, 10 and 11 collieries are in good condition.

### West Lehigh Colliery

This is a small operation, on water level. The sanitary condition is fair.

East Lehigh Colliery

The condition of the colliery is fair.

Tuscarora Colliery

Sanitary condition of the colliery is fair.

Bell Colliery

Sanitary condition of the colliery is fair.

Sebastopol Colliery

This colliery is a small operation and is in fair condition.

### Laurel Run Colliery

They are doing nothing at this colliery at the present time but stripping.

### Improvements

# LEHIGH COAL AND NAVIGATION COMPANY No. 10 Colliery

Ground was broken for two shafts, one water shaft, four compartments, on March 3, and a two compartment coal shaft on May 18. Soil was removed to rock and concrete built up for 30 feet. The water shaft will be 17x7 feet square, four compartments, and the coal shaft will be 15x11 feet, two compartments. The coal shaft has been driven 54 feet and the water shaft 159 feet in the last year. A battery of Sterling boilers 600 horse power has been placed to generate steam for this plant. A new piece of railroad has been built from the main line of the Central Railroad of New Jersey to convey supplies to the new shaft.

### No. 11 Colliery

A tunnel was driven from north dip of Mammoth vein to F vein, a distance of 207 feet from F vein to G vein, a distance of 60 feet, and is continued on to cut the H vein. A new 24 foot fan has been erected to replace the old ones. Two new airways are now being driven on Skidmore vein with an area of 72 feet each to connect to this fan.

### No. 12 Colliery

The tunnel driven across the basin from the Primrose vein south, for a distance of 2,442 feet was stopped on June 20, and an air hole is now being driven on one of the small veins to the surface. When this hole is completed, work on the tunnel will be resumed. Twin holes have been driven on G vein from this tunnel to the surface, a distance of 670 feet. One of these holes has been enlarged for a distance of 322 feet from the surface down and timbered with a 7½ foot collar and 8 foot legs to make a single track slope. Gangways have been turned off east and west and a breast opened. The vein is in fair condition with 7 to 8 feet of good coal. The remaining part of this hole down to the tunnel has been timbered with a 5½ foot collar and 7 foot legs which can be used for an airway or counter chute.

### PHILADELPHIA AND READING COAL AND IRON COMPANY

### Silver Creek Colliery

A tunnel has been started in the bottom bench, south dip shaft level, to be driven through saddle to the bottom bench on the same dip.

### Eagle Hill Colliery

Ground was broken on May 5th for a new four compartment shaft, the soil removed down the rock and concreted up for 28 feet, head frame built, engine and boilers placed, and preparations made to start on the rock work on the first of the year.

An overhead tunnel is being driven from breast No. 51, West Skidmore, south dip, to West Mammoth vein, for the purpose of bringing the return air from Mammoth vein to Skidmore vein.

### MILL CREEK COAL COMPANY

### Vulcan Colliery

The tunnel to the Primrose vein is being continued across the basin to strike the Primrose vein on the south dip and also the top split of the Mammoth on the south dip. A tunnel is also being driven on the fourth level from the Skidmore vein to the bottom split of the Mammoth vein. This is done to avoid a long distance in fault in the bottom split of the Mammoth vein. The No. 1 slope has been continued another lift to the lifth level. The water in the old Gorman slope in the Primrose vein, has been tapped and run off, leaving this territory safe from standing water. A new 25 foot fan has been erected which should give ample ventilation to this mine.

No. 3 slope, Buck Mountain vein, north dip, has been sunk 300 feet to the sixth level, and the gangway east and west turned off.

A tunnel has been driven from the bottom split of the main vein, north dip, to the top split of the Mammoth vein, north dip, a distance of 267 feet.

A tunnel has also been driven from the south dip of the bottom split of the Mammoth vein to the south dip of the top split of the Mammoth vein, a distance of 113 feet. Both tunnels are on the third level. The top split is 12 feet thick and in good condition.

. A tunnel has also been commenced from the fourth level, north dip, Buck Mountain vein, to be driven to the bottom split of the Mammoth vein on the south dip.

A new compressed air locomotive has been purchased in addition to the other two in use, to be used on third level for collecting and distributing the cars to and from the working places. A sixteen foot fan has been erected at No. 3 slope, and new airways completed inside to connect with it. This, in connection with the sixteen foot fan at No. 1 slope, will insure good ventilation at this colliery.

At No. 3 slope, four return tubular boilers of 150 horse power each, have been installed. A pair of hoisting engines 26 by 48 with a 12 foot drum, has been completed.

### New Boston

Work preparatory to pumping out the old workings has been going on, a boiler plant has been installed, consisting of 14 return tubular boilers of 150 horse power each, and six Goyne pumps 24x10x36

inches have been placed in position in the various slopes, and the mouths of the slopes have been timbered, ready for pumping.

### LEHIGH AND WILKES-BARRE COAL COMPANY

### No. 4 Colliery

Two pump rooms in rock on fourth level, each 50 feet long, 18 feet wide, 12 feet high. Three 14 inch bore holes, each 130 feet long, from the surface to Gamma vein through which water will be pumped. Two 12 inch bore holes each 130 feet long for steam lines. A sump tunnel 186 feet long one under ground, slope 12x7 feet and 260 feet long in Lykens vein from fourth level to fifth level. Extension now in progress, one tunnel 11x7 feet and 91 feet long from Buck Mountain vein to Gamma vein on second level. One tunnel 11x7 feet by 328 feet long from Lykens vein, south dip, to Lykens vein, north dip, on No. 2 plane level. One tunnel 10x7 feet by 128 feet long, from Buck Mountain vein to Gamma vein on No. 2 plane level.

A new Guibal fan 12 feet in diameter, 4 foot blades on airway at No. 16 slope. New plant at No. 2 stripping consisting of plane hoisting engines, 10x24, and one 150 horse power tubular boiler and necessary buildings, 500 horse power Babcock and Wilcox boilers, added to boiler plant at this Colliery.

### No. 5 Colliery

One tunnel 11x7x390 feet long, from Gamma south dip to Gamma north dip, cutting the Wharton vein on south dip and north dip and the Mammoth vein close to the basin of the same. One new Guibal fan 15 feet in diameter and 4 foot blades on airway in Gamma vein. Water level tunnel at Green Mountain continued 490 feet to Sevenfoot Buck Mountain and Lykens vein, south dip. One Guibal fan 8 feet in diameter 3 foot blades on air way in north dip, Lykens. One thousand horse power Babcock & Wilcox boilers complete to replace boiler plant too close to breaker. One Jeanesville 12x18 inch and 12x18 inch compound wash pump for breaker. One 25 ton Porter locomotive 12x18x36 inch drivers.

### BUTCHER CREEK COAL COMPANY

### Juglar Colliery

A new breaker has been erected with a capacity of 250 tons per day. A piece of railroad track has been extended to the breaker.

### MARY D. COAL COMPANY

### New Operation

Mary D. Coal Company has commenced to open a new colliery on the Kentucky bank tract, owned by the Lehigh Coal and Navigation Company. One mile east of Tuscarora a slope is now being sunk and at present is down 200 feet. The intention is to sink it to the basin, to be used when the colliery is opened up as a tender slope. A shaft will immediately be sunk in the next basin south, which will be connected by a tunnel to the slope they are now sinking. This will give them an opportunity to work both basins.

### COXE BROTHERS AND CO., INCORPORATED

A new reversible fan 20 feet ia diameter, built by the Vulcan Iron Works of Wilkes-Barre, has been installed. This will furnish abundance of air for this mine. A funnel is now being driven from the Buck Mountain vein on the south dip across the basin to the north dip of the Buck Mountain vein at breast.

### TRUMAN M. DODSON COAL COMPANY

### Kaskawilliam Colliery

The new shaft sinking is down 692 feet, a distance of 362 feet for the year. The Seven-foot vein was cut at a distance of 360 feet and the intention is to sink 200 feet more. Also a fan hole which was being driven to the surface on Skidmore vein, Northdale workings, is up 609 feet. A rock chute has been driven from the tunnel at the bottom of No. 1 slope up to the Orchard vein, a distance of 80 feet, striking the basin. Two gangways have been started in this vein. A tunnel was driven from Mammoth vein east in No. 1 slope to the Skidmore vein, a distance of 80 feet.

Preparations have been made to sink a new slope (inside) on the bottom split in Northdale basin and is now ready for contractors to start to work.

### DODSON COAL COMPANY

### Morea Colliery .

A short tunnel has been driven from the east Seven-foot vein to the East Skidmore vein, on the second level. Bore holes have been drilled from the surface for ropes for No. 2 and No. 3 inside slopes. Work on the slope is still in progress. No. 2 slope is designed to take the second and third level coal, on the west side, to the present slope level, and No. 3 slope will take the third level and basin coal,

on the east side, to the present slope level, thus freeing the shaft to be used in hoisting water. Five new return tubular boilers 72x17 x6 inches, are now on the ground, but not placed. These are intended to replace the 24 cylinder boiler now in use. Plans have been completed to rebuild the breaker plane and also to build a flume to move the creek to the south side, which will release a large amount of coal.

### Mine Foremen's Examinations

The annual examinations of candidates for mine foremen and assistant mine foremen certificates during the year 1903 resulted in the following named persons being recommended to the Chief of Department of Mines for certificates.

### Assistant Mine Foremen

Henry Petrich, Mahanoy City; Thomas P. Maley, Cumbola; Owen J. Langton, Cumbola; Michael Ryan, Silver Creek; John Glover, Tamagua; James Tobin, Cumbola; Edward DeLay, Tamaqua; John F. DeLay, Tamaqua; James McCovern, Silver Creek; John Curry, Silver Creek; James Larey, Silver Creek; Edward Gay, Silver Creek; Richard Large, Silver Creek; John T. Davis, Seek; William Reynolds, Silver Creek; Edward J. Stapleton, Palo Alto; John M. Callaway, Kaska William; James T. Mekley, Seek; Daniel Lloyd, Morea; D. C. Gildea, Coaldale; Patrick Hartnett, Cumbola; Peter Murray, Cumbola; Charles Duesch, Mahanoy City; John R. Davis, Lansford; Robert Parfitt, Coaldale; Maurice Friel, Mahanoy City; Jacob Rosser, Morea; Shadrach M. Davis, Tamaqua; David Lloyd, Morea; Thomas J. Richards, Lansford; John Russel, Kaskawilliam; W. H. Thomas, Kaskawilliam; William A. Moses, Broad Mountain; John O'Haren, Silver Creek; Walter Yemm, Coaldale; E. J. Flanigan, New Philadelphia; Thomas West, Coaldale; Daniel O'Donnel, Coaldale; Thomas Barrett, Coaldale; Harry Watkins, Coaldale; George H. Comley, Buck Mountain; Artemus Jones, Seek; John P. Fisher, Coaldale; Robert H. Jones, Lansford; William Minahan, Frackville; James Heeney, New Boston; Thomas O'Neil, Kaskawilliam; Frederick Stevens, Lansford; John Bowen, Seek; John Brocker, Mahanoy City; Michael Curtis, Mahanoy City; Richard Morgan, Coaldale; Rees S. William, Tamaqua; Patrick McGroarty, Morea; William M. Rosser, Morea; James Phillips, Mahanoy City; David Yemm, Coaldale; Lewis Middlekamp, Seek; William Dormer, St. Clair; Philip Richards, Coaldale; Lewis Middlekamp, Seek.

The board was composed of the following members:

John Curran, Mine Inspector, president; Mahlon A. Gerber, superintendent, Tamaqua; Nicholas Murray, miner, Cumbola; Thomas Phillips, miner, New Philadelphia.

## Fourteenth Anthracite District

NORTHUMBERLAND COUNTY

Mt. Carmel, Pa., February 28, 1904.

Hon. James E. Roderick, Chief of the Department of Mines:

Sir: I have the honor to submit herewith my first annual report as Inspector of Mines of the Fourteenth Anthracite District for the year ending December 31, 1903.

Statistics, as required by law, are given in the various tables, together with a brief description of the accidents that occurred during the year, and remarks regarding the condition of the collieries. Very few improvements have been made in this district during the year.

I assumed the duties of the office September 1, 1903, by appointment of the Honorable Judge of Northumberland county, upon the resignation of Mr. James Tinley.

Respectfully submitted,
BENJAMIN I. EVANS,
Inspector.

### Fourteenth Anthracite District, 1903.

### SUMMARY OF STATISTICS

Number of mines in district,	27
Number of mines in operation,	26
Number of tons of coal produced,	4,927,304
Number of tons shipped to market,	4,337,264
Number of tons sold at mines to local trades,	79,180
Number of tons consumed at mines in generating steam	
and heat,	510,860
Number of persons employed inside the mines,	9,312
Number of persons employed outside,	5,268
Number of fatal accidents inside the mines,	35
Number of tons produced for each fatal accident inside,	140,780
Number of persons employed per fatal accident inside,	266
Number of fatal accidents outside,	8
Number of persons employed per fatal accident outside,	659
Number of wives made widows by fatal accidents,	21
Number of children ophaned by fatal accidents,	51
Number of non-fatal accidents inside of mines,	51
Number of persons employed per non-fatal accident	
inside,	183
Number of non-fatal accidents outside,	13
Number of persons employed per non-fatal accident	
outside,	405
Number of compressed air locomotives inside,	2
Number of electric motors used inside,	3
Number of fans used for ventilation,	57
Number of gaseous mines in operation,	. 10
Number of non-gaseous mines in operation,	16

### TABLE A.—Fourteenth Anthracite District, 1903.

### PRODUCTION OF COAL

Names of Companies	Tons
Philadelphia and Reading Coal and Iron Company,	2,087,173
Susquehanna Coal Company,	862,359
Mineral Railroad and Mining Company,	741,139
Excelsior Coal Company,	239,330
Enterprise Coal Company,	258,946
Greenough Red Ash Coal Company,	166,290
T. M. Righter Coal Company,	155,937
Seneca Coal Company,	106,083
White and White,	48,666
Shipman Koal Company,	58,803
Llewellyn Mining Company,	
Buck Ridge Coal Company,	11,199
Shamokin Coal Company,	130,495
Total,	4,927,304
Production by Counties	
Northumberland,	4,927,304

Totals and averages for district, .....

TABLE B.-Fourteenth Anthracite District, 1903

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of to	Fatal	əbiznī	H470 60 H 60 H 10 10 10 10 10 10 10 10 10 10 10 10 10
Fatal and non-fatal accidents; number of tons of coal produced per accident; number of persons employed; number employed per		Names of Companies	Philadelphina and Reading Coal and Iron Co., Mineral Railroad and Mining Co., Busquehana Coal Co., Excelsior Coal Co., Liewellyn Mining Co., Liewellyn Mining Co., White and White, White and White, Shamokin Coal Co., T. M. Righter and Co., Shamokin Coal Co., The Alexand Ash Coal Co., The Coal Coal Co., The Coal Co., The Coal Coal Co., The Coal Co., The Coal Coal Co., The Coal Coal Co., The Coal Coal Co., The Coal Coal Co., The Coal Coal Co., The Coal Coal Co., The Coal Coal Co., The Coal Coal Co., The Coal Coal Co., The Coal Coal Co., The Coal Coal Co., The Coal Coal Co., The Coal Coal Co., The Coal Coal Co., The Coal Coal Co., The Coal Coal Co., The Coal Coal Co., The Coal Coal Coal Co., The Coal Coal Coal Co., The Coal Coal Coal Coal Co., The Coal Coal Coal Coal Coal Coal Coal Coal

TABLE C.-Fourteenth Anthracite District, 1903

# Classification of Fatal Accidents

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TABLE D.-Fourteenth Anthracite District, 1903

Classification of Non-Futul Accidents

	····	Grand total	4 4 8 10 10 8 4 10 F 8 8 F 4		
		Total outside	N 0 NEEDE EE 92		
09		Miscellanecus causes	N		
f Mine		By boiler explosions			
Outside of Mines		By suffocation			
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		By cars	62 14		
		Potal inside	ಚನ್ನಾಣಯಗಳಿಕೆ ಹಿಡಲಾಡಿ ಕೆ		
		Miscellaneous causes	H 614 00		
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Inside of Mines	By	shorts			
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		Smothered by gas	CO 85		
		By explosion of gas	ilem included 5		
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			January, March, March, May June, July, August, September, October, December, Totals,		
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Occupations of Persons Killed or Fatally Injured Inside and Outside the Mines TABLE E.-Fourteenth Anthracite District, 1903

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TABLE F.—Fourteenth Anthracite District, 1903 Occupations of Persons Injured Inside and Outside the Mines

	Grand total	44000000400000	64
	Potal outside	N O NHHHH HH	13
	All other employes	c) 0) HHH H	00
	Book-kerpers and clerks		
٥	Slate pickers (men)		
Outside	Slate pickers (boys)	H H	
	Engineers and firetien		62
	Elacksmiths and carpenters		14
	nemerol elistuO		
	Superintendents	ರಾಗಾದಾದ ಅವರ ಕಾರ್ಯ	
	Total inside		51
	All other comployes	01 = = == =	7
	Company men		
! !	Pumpmen		-
υ υ	Door-boys and helpers	::: : : : : : : : : : : : : : : : : :	00
Inside	Drivers and runners	::0::1::1	9
	Miners' laborers	0000004000004	
	Miners		29
	Fire bosses and assistants		
	Assistant mine foremen.		
	nemerol eniM		
		January. Rethousty, March, Appril, May. May. August, September, October, November, December,	Totals,

### TABLE G .- Fourteenth Anthracite District, 1903

Nationality of Persons Killed or Fatally Injured Inside and Outside the Mines

	American	English	Irish	German	Polish	Hungarian	Italian	Slavonian	Austrian	Russian	Greek	Prussian	Totals
May, June,	1 1 1			1	1 1 4 1 1 3 1 1 3 3 3	1		1 1	1	1		1	44 99 33 44 35 55 31 11 11

### TABLE H.—Fourteenth Anthracite District, 1903 Nationality of Persons Injured Inside and Outside the Mines

	American	English	Irish	German	Polish	Hungarian	Italian	Lithuanian	Austrian	Russian	Totals
January, February, March April, May, June, July, August September, October, November, December,	33 44 11 11 13 33 326	2			1 2 3  1 1 2 1 2 1	2 1	1 1				4 4 8 5 5 6 4 5 7 6 6 3 7
Totals,	28	2	2	1	17	5	3	1	2	3	64

TABLE I.-Fourteenth Anthracite District, 1903

Operators and mines, kind of openings, type and size of fans, size of furnaces, volume of air produced by fan or furnace per minute number of splits of air currents, number of persons employed inside, and quantity of air produced for each employe per minute

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	ni-beqoleveb egusg tester Redomi	सार्वीकश्चानक स्वक्रांनिक क्वीस व सस संवक्षीत सम व्यस्तिस	4.4
	Yumber to revolutions per shuning	#232 #232 #238 #238	15.81
	Depth of blades in feet	ರಾಣದಾಶಾಗಾಶಾಣ್ಯಕಾಣದಕ್ಕತುಗಾರದುಕುಣಬ ಈ ಈ ಕಾರದಲ್ಲಿಕ ಬಹಡ ಪಡುದರ	rc ≠.
	feet at sebald to AlbiV/	र-वल्लक्सणावस्तालक्ष्मिनावस्त्राच्याच्याच्याच्याच्याच्याच्याच्याच्याच्य	3.117
	feet in fall to retemble	22888868888888888886868	118
	nottalithey to bodiek	Pan Pan Pan Pan Pan Pan Pan Pan	Fan,
-	Gaseons or non-gaseons	CASPOUS. (CASPOU	Gasecus,
	Enineqo to bniX	Shaft Shaft Shaft Shaft Shaft Shaft Shaft Shaft Shaft Shaft	Slope,
minaco	Names of Operators and Mines	8:::::::::	Mineral Railroad and Mining Co. Cameron colliery, No. 7 vein, Cameron colliery, No. 9 vein,
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Note Pre-	# <u># # # # # # # # # # # # # # # # # # </u>		::: 2 <u>i</u> 7 i	% Per	Slepe,	slope	Slope,	Sha t,	Shaft,	Slope,	Slope
Chameron cofficer, No. II vein, Chameron cofficer, No. II vein, Janke Felder steat No. 2, Lanke Felder steat No. 1,	Susquehanna Coal Co. Union Collegenes Fenissyvenia N., 9 v. m. Fenissyvenia N., 9 v. m. Fenissyvenia N. 19 No. 9 vem. Shatt Fer. Richard N. du. 11 Richard N	Hi keay Ridge No. 5 St. 19. He weay Ki Thekeny swemp.	Wante and White No. 1 fan Calmbers No. 2 No. 2 fan Colmonar No. 2	Excelsion (Control of Control of	T. M. Eighter and Co. Mount Carnol Senera Coal Co.	Star No. 1, 20 at No. 3,	Enterprise Co. Co. Enterprise No. 1 fan. Enterprise No. 2 fan.	Shipman Koal Co.	Greenough Red Ash Coal Co. chronough No. 1, chronough No. 2,	Llewellyn Mining Co. Boyal Oak,	Shum-kin Coal Co. Natulie No. 2. Natulio No. 4. Notable No. 4.

Operators, Location of Collieries, Railroads, Etc. TABLE 1.-Fourteenth Anthracite District, 1903

Railroad to Mine	Philadelphia and Reading Philadelphia and Reading Philadelphia and Reading Philadelphia and Reading Philadelphia and Reading Philadelphia and Reading Philadelphia and Reading Philadelphia and Reading Philadelphia and Reading Philadelphia and Reading Philadelphia and Reading Philadelphia and Reading Philadelphia and Reading Philadelphia and Reading	Lehigh Valley	Lehigh Valley	Pennsylvania (N. C., Pennsylvania (N. C.) Pennsylvania (N. C.) Pennsylvania (N. C.) Pennsylvania (N. C.) Pennsylvania (N. C.)	Pennsylvania (N. C.) Pennsylvania (N. C.)	Philadelphia and Reading Philadelphia and Reading	Philadelphia and Reading	Pennsylvania (N. C.)
P. O. Address	Pottsville, Pottsville, Pottsville, Pottsville, Pottsville, Pottsville, Pottsville, Pottsville, Pottsville, Pottsville, Pottsville,	Centralia,	Centralia,	Shamokin, Shamokin, Shamokin, Shamokin, Shamokin, Shamokin,	Shamokin,	Shamokin,	Scranton,	Shamokin,
Name of Superin- tendent	John Veith, John Veith, John Veith, John Veith, John Veith, John Veith, John Veith, John Veith, John Veith, John Veith,	J. M. Humphreys,	J. M. Humphreys,	Wm. R. Reinhardt. Wm. R. Reinhardt. Wm. R. Reinhardt. Wm. R. Reinhardt. Wm. R. Reinhardt. Wm. R. Reinhardt.	E. A. Rhoads,	A. D. Robertson, G. W. Robertson,	W. L. Connell,	E. J. Corliss,
P. O. Address	Pottsville, Pottsville, Pottsville, Pottsville, Pottsville, Pottsville, Pottsville, Pottsville, Pottsville, Pottsville,	Wilkes-Barre,	Wilkes-Barre,	Wilkes-Barre, Wilkes-Barre, Wilkes-Barre, Wilkes-Barre, Wilkes-Barre, Wilkes-Barre,	Wilkes-Barre,	Pottsville,	Scranton,	
Name of General Superintendent	W. J. Richards, W. J. Richards, W. J. Richards, W. J. Richards, W. J. Richards, W. J. Richards, W. J. Richards, W. J. Richards, W. J. Richards, W. J. Richards, W. J. Richards, W. J. Richards,	S. D. Warriner,	S. D. Warriner,	R. A. Quin, R. A. Quin, R. A. Quin, R. A. Quin, R. A. Quin,	R. A. Quin, R. A. Quin,	Andrew Robertson, Andrew Robertson,	W. L. Connell,	
County	North d North d North d North d North d North d North d	North'd,	North'd,	North'd, North'd, North'd, North'd, North'd,	North'd,	North'd,	North'd,	North'd,
Names of Operators and Collieries	Philadelphia and Reading Coal Burnside, Bear Valley, Henry Clay, Sig Mountain, Sterling, North Franklin, Alaska, Reinne, Locust Gap, Locust Gap,	T. M. Righter and Co. Mount Carmel,	Seneca Coal Co.	Susquehanna Coal Co. Union collieries, Pennsylvania, Hickory Swamp, Hickory Ridge, Richards, Scott shaft,	Mineral Railroad and Mining Co. Cameron, Luke Fidler,	Excelsior, Coal Co. Corbin,	Enterprise Coal Co.	Shipman Koal Co.

_				
Pennsylvania (N. C.)	Lehigh Vallev	Wm. H. Llewellyn, Shamokin, Phliadelphia and Reading	North'd, Nathani-l Taylor, Natalie, Edward Brennan, Shamokin, Philadelphia and Reading	Philadelphia and Reading
	Lehigh Vallev	Shamokin,	Shamokin,	D. H. McGee, Minersville,
		Win. H. Llewellyn,	Edward Brennan, .	D. H. McGee,
Shamokin,	Mount Carmel,		Natalie,	
Edward Brennan, .	North'd, E. E. White, Mount Carmel,		Nathaniel Taylor,.	
North'd,	North'd,	North'd,	North'd,	North'd,
Greenough Red Ash Coal Co. North'd Edward Brennan, Shamokin,	White and White Columbus No. 2,	Llewellyn Mining Co. Royal Oak,	Shamokin Coal Co.	Buck Ridge Washery,

TABLE 2.-Fourteenth Anthracite District, 1903

Number of tons of coal mined in each colliery, number of days worked, number of persons employed, number killed and injured, number of kigs of powder used, etc.

Number of horses and mules	25 52 52 52 52 52 52 52 52 52 52 52 52 5	690	590	40
Number of pounds of dynamite	475 8 5 5 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6	152, 141	28.939	9,740
Mumber of kegs of powder used	1, 164 1, 109 1,	46.61.	46,613	3,026
Number of non-fatal accidents	9 H 10 H 10 10 H 10 10	63	63   63	C1
Mumber of fatal accidents	c:010y1. → 00 → → 00 05	9	<u>۾</u> ا	-
səyəlqərə to usdmuN	20222 988748	5,050	5, 68th	278
Number of days worked	* 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	141	216	213
enot ni lsoo to nottonborq, lstoT	23.00 SS	2,087,173	2,0×7,173	106,083
Number of tons sold to local trades and used by employee	5.407 2.304 4.517 1.673 1.0,233	2.,590	20,590	871
Mumber of tens used for steam seitelifes is ised ban	88, 4 2/12/2 12/3 2/3 2/3 2/3 2/3 2/3 2/3 2/3 2/3 2/3	211,2.3	18, 494	7,470
bedqida laos to anot to redunuk sziwradto to lier yd	217.5.2 217.5.2 217.5.3 316.6.8 316.6.	1,816,370	1, 146, 350	97,742
County	North'd North'd North'd North'd North'd North'd North'd North'd North'd	North'd, North'd,	North'd,	North'd,
Names of Operators and Collieries	Philadelphia and Reading Coal and Iron Co. Henry Clay. Big Meantain, Bear Valley, Bear Valley, Docust Gap. Locust Spring. Laska. Reliance,	Locust Spring washery, Merriam washery,	Totals,  T. M. Righter and Co. Mount Carmel colliery,	Sioux colliery,

\*Totals in this column are averages

Susquehanna Ceul Co. Union Collieries Pennsylvarina. Hickory Swamp, Hickory Swamp, Krehard Seout shaff,	North'd, North'd, North'd, North'd, North'd	268, 650 \S3, 341 1465, 505 219, 634	27, 608 17, 577 48, 665 49, 406	5, 785 NOT STORY S	302, 044 101, 723 189, 998 268, 504	88.5 1.8 1.8 1.8 1.8 1.8 1.8 1.8 1.8 1.8 1.8	1,094 565 729 1,272	m [e4:161	4 81	10,786 1,291 4,259 6,123	21,040 4,276 5,659 27,932	109 56 95 95
Totals,		716,573	128,251	7.795	863, 358	201	3,600				150	3119
Mineral Railroad and Mining Co. Cameron, Luke Fidler,	North'd,	280, 672 250, 7M	34,945	12, 2.4	428.845 3.11.231	202	1,497	60 51	60 C1	12,044 S,649	33,821 20,869	142
Potals,		6.2, 453	68,221	50,162	741,139	종	2,457	1 5	10	20,683	60,76	Ce.2
Excelsior, Coul Co.	North'd,	116,571 102,510	7,500	G)	124, 6 15 114, 500	0.150 0.150 0.400	5.50		i 1 :	2, 3m	2,300	36
Totals.		EIS, 0N1	18,10	ŝ	1,000,000	i S	3	6:	1		4.004,	63
Enterprise Coal Co.	Northäd,	211.191	17,391.	381	258,916	31	614				6,956	11
Collect, Shipman Kull Co.	North'd,		1777	1.941	58, sng	141	330	1 :	11	1,765		36
Greenough Red Ash Coal Co.	North'd,	161,972	4,000	318	16,25	- 2	. 25de .			4,686		24
Columbus No. 2.	North'd,	40,260	E5.4	3, 231	48,646	1 1	204			2,777	 	1 1
Inlewellyn Mining Co.	North'd,	52,349	5,475	60, 1980		1 6	. 5	11 22	-	1,500	800	124
Natali-, Shamokin Coal Co.	North'd,	121,003	9,000	450	139,485	152	583		47	3,110	0,00	. 69
Puck Ridge Washery,	North'd,	10, <90	30.0		11,199		8					2
Grand totals,		4,337,264	510,860	79,180	4,927,304		14.580			****		1,472
				,								-

Number of horses and mules	590 309 220 220 63 24 71 15 15 15 15 15 15
Number of Dounds of dynamite	162, 141 58, 007 60, 760 28, 539 9, 740 7, 000 7, 000 7, 000 800 900
Number of kegs of powder used	46.613 22.459 20.683 6.880 6.880 6.880 8.311 11.785 2.715 2.715 3.140
Number of non-fatal accidents	21 21 22 24 24 25 25 25 25 25 25 25 25 25 25 25 25 25
Number of fatal accidents	<u>е</u> 6 6 6 6 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7
Number of employes	2, 500 2, 500 2, 457 2,
Number of days worked (Not including washeries)	255 201 262 267 267 273 273 273 194 152 152
snot ni faco to nottonborq fatoT	2,087,173 862,359 741,139 239,339 156,93 106,03 258,84 55,84 16,20 48,666 18,64 18,64 11,199 4,927,304
Number of tons sold to local trade and used by employes	29,590 7,7250 30,162 30,162 1,253 1,211 1,211 3,100 430
Number of tons used for steam and heat at collieries	211, 233 138, 251 168, 721 19, 494 17, 470 17, 391 17, 391 17, 470 17, 470 17, 470 18, 475 18,
Mumber of tons of cost shipped by rail or otherwise	1,846,350 716,383 612,456 210,681 115,551 97,142 211,191 61,176 101,972 101,972 101,973 101,894 4,831,884
County	North G North G North G North G North G North G North G North G North G
Names of Operators and Collieries	Philadelphia and Reading Coal and Iron Co., Busquehama Coal Co., Mineral Railroad and Mining Co., Excelsior Coal Co., T. M. Righter and Co., Beneral Coal Co., Enterprise Coal Co., Enterprise Coal Co., Enterprise Coal Co., Greenough Real Ash Coal Co., Greenough Real Ash Coal Co., Llewellyn Mining Co., Shamokin Coal Co., Buck Run Coal Co.,

TABLE 2-Continued

		ž	Number of	of Boilers	ers		Locc	Locomotives			vering	əşnui	ariace	8	To the Contract of the Contrac	
Names of Operators and Collieries	County	Cylindrical	Horse power	TsluduT	Horse power	Total horse power	Masta	TiA	Electric Number of steam engines o	cjusses	Total horse power  Number of pumps deliverer to surface	Capacity in gallons per m	Quantity delivered to su per minute-gallens	Number of electric dynamos	Number of air compressors	
Philadeliphia and Reading Coal and Iron Co. Henry Clay, Big Mountain, Burnade, Burnade, Bear Villey, North Franklin, Locust Gap, Locust Spring, Alaska, Reliance,	North'd North'd North'd North'd North'd North'd North'd North'd	188	720 120 150 666	128 188 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	1, 820 2, 680 2, 680 1, 300 1, 300 2, 340 1, 660 1, 560	1,820 2,720 2,080 1,420 1,300 1,706 1,560	H H H NN	C)		2 44 4444 20 5 6 5 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	2,357 1,156 1,176 1,176 1,175	\$ 50000 \$ 500000 \$ 50000 \$ 50000 \$ 50000 \$ 50000 \$ 50000 \$ 50000 \$ 50000 \$ 500000 \$ 500000 \$ 500000 \$ 50000 \$ 50000 \$ 50000 \$ 50000 \$ 50000 \$	1.21.1.2.2.3.4.2.2.3. 17.1.1.2.2.3.4.2.2.3.			
Totals,		20	1,626	£	12,220	13,846	[~	23	:	17,	300	41 31,445	25,488		2	
Locust Spring washery, Merriam washery,	North'd,													::		
Totals,		26	1,626	25	12,230	13,546	ţ=	2		136 17	17,300	41 31,445	25.458		2	
T. M. Richter and Co. Mount Carmel colliery,	North'd,	50	380	4	600	086	, (c)			26	89.1	3,850	1 11			
Sioux coiltery.	North'd,			9	1,050	1,050	1			25 2,	367	1 588	400			
				H				=)===		11				11		

# TABLE 2-Continued

		Ż	Number	of Boilers	va.		Locon	Locomotives	911		Sulre	əjnu	Pface		The state of the s
Names of Operators and Collieries	County	Cylindrical	Horse power	TsluduT	Horse power	Total horse power	Steam	Air. oirioəfd	Number of steam engines of	Total horse power	Number of pumps delly.	Capacity in gallons per mil	Quantity delivered to sur per minute—Eallons	Number of electric dynamos	Number of air compressors
Susquehanna ('cal Co. Union Colliertes Pennsylvania, Hickory Swump, Hickory Rudge, Richard, Scott shaft, Totals,	North d. North d. North d. North d. North d.	10 10	380	원기들은 :   %	1,500 140 2,200 2,500 6,140	1,500 2,000 2,000 1,500 1,500 1,500 1,500	21 0400 1-		61 177 16	6.64 6.64 6.64 6.64 6.64 6.64 6.64 6.64	13/20/13	4000 4 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	1,45	:::::	- : : :   -
Mineral Railroad and Mining Co. Cameron. Luke Fidler,	North d	2	40			2,225	1 - 1	0 1	11 1	3,310	B :	4, 738	4.73	:   [7]	63
Totals,  Excelsion.	North'a	e1    &	07	68	H	4,8%	<u> </u>		60	6,186	= 1	4,728	4.73	-	67
Corbin, Totals,	North'd,	88   88	1,000			1,050	1		-0. 13	967	- 24   62	1.068	250		
Enterprise Coal Co.	North'd			16	2,090	2,000		co	17	1,314	1	2,274	2,456	2	-
Colbert, Shipman Koal Co.	North'd,			9		640	-			645	6.3	1,350	700		

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250			700		44, 122		25, 458 4, 673 4, 735 4, 735 3, 875 7, 456 2, 456 2, 456 7, 400 4, 122
250		SOO	1.250	· 1.	66,288		11. 14. 17. 14. 17. 17. 17. 17. 17. 17. 17. 17. 17. 17
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200	9	400		450	28,130	2—Recapitulation	12, 220 6, 145 4, 845 6, 165 1, 650 2, 060 610 450 450 28, 130
60		61		60	216		94.53.33.33.33.33.33.33.33.33.33.33.33.33.
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North'd,	North'd,	North'd,	North d	North'd,			North d North d North d North d North d North d North d North d North d North d
Greenough Red Ash Coal Co.	('blumbus No. 2,	Reyal Oak, Liewellyn Mining Co.	Shamokin Ctal Co.	Buck Ridge Washery.	Grand totals,		Philad-liphia and Reading Coal and Iron Co Susquelating Coal Co. Mineral Rat rest and Mining Co., T. M. Itakhter and Co., Extremelation Coal Co., Extremelation Co., Extremelation Co., Shipman Koal Co., Shipman Koal Co., Chirectory Red Ash Coal Co., White and White. Shamolan Coal Co., Shamolan Coal Co., Shamolan Coal Co., Shamolan Coal Co., Shamolan Coal Co., Shamolan Coal Co., Shamolan Coal Co., Shamolan Coal Co.,

TABLE 2-Recapitulation

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4	61	-												98
17, 306	85. N	6,116	65	- 1757	2,267	1,311	645	100	1/0	370	411	12/21		41,125
136		3.1	15	26	51	11	- L -	6:	10	L ~	77	-		17:
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North'd.	North'd,	North'd	North'd	North'd	North'd	North'd	North'd	North'd,	North'd	North'd	North'd	North'd		
oal and Iron Co.		ng Co								Llewellyn Mining Co.,				Totals,

TABLE 3.—Fourteenth Anthracite District, 1903 Number of Each Class of Employes at Each Colliery

	Grand total inside and outside	2566 297-7097-7097-7099-9955-9955-9955-9955-99	5,080	1.094 1.272 729 505	3,600
side	Spistno (Riof)	283 288 288 288 288 288 288 288 288 288	1,823	414 507 3°6 214	1,461
Outs	./ll other employes	53 30 133 148 148 115 115 9	858	264 345 182 135	926
ployed	Book-keepers and clerks	es ⊢0000 model	19	ಬಾಬಬಳು	13
s Em	slate hickers (men)	21 27 27 27 27 11 16	159	20 17 20 8	89
Persons Employed Outside	Slate pickers (boys)	0 27.7.8.8.8.8.8.9.0.0.0.0.0.0.0.0.0.0.0.0.0.0	423	85 88 40	285
Occupations of 1	Engineers and fremen	118 118 117 117 118 118 119 119 119 119	222	29 37 21	121
tion	Ulacksmiths and carpenters	8 - 12 - 22 - 23	19	01200	36
upa	namerol ebistuO	MHERRE HORE	=		. 4
000	Superintendents	THEFT	:    -	818181	00
	Total inside		3,257	680 765 403 291	2,139
side	All other employes	04044489 044489 044489 044489 044489	859		
Employed Inside	Company men	21 82 12 24 27 25 25 25 25 25 25 25 25 25 25 25 25 25	265	153 286 179 93	641
mploy	. Lumpmen	0	12	10 8 4 2 7	24
Persons E	Door-boys and helpers	2224114222	92	00100	30
	Drivers and runners	2214 22 22 24 25 25 25 25 25 25 25 25 25 25 25 25 25	237	2223	128
Occupations of	Miners' laborers	######################################	488	111 99 77 60	347
cupati	raniM.	24 4 4 2 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	1.478	338 315 172 97	922
00	Fire bosses and assistants	04450046010 : :	ا ا م	70.77	33
	nemerol enim tankistak	<u> </u>	e1	10 ± 01 ←	12
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	County	NNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNN		North'd, North'd, North'd, North'd,	
	Names of Operators and Collieries	P. and R. Coal and Iron Co Henry Clay, Big Mountain, Bur Mountain, Burnside, Bear Yalley, Locust Gap, Locust Gap, Locust Spring, Reliance, Alaska. Locust Spring washery, Merriam washery,	Totals,Susquehanna Coal Co.	Pennsylvania. Richards. Hickory Ridge. Hickory Swamp.	Totals,

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1,497	2,457	32	255	484	204	244	644	330	204	276	350	585	14,580
395	009	32	96	172	129	25	S22	141	148	101	114	204	5, 268
154	288	84	8.8	77	ŝ	6.0	12.	44	92	488	29	43	2,669
9	12	-	12	co	-	63	2	61	64		2	4	64
9	9		·	00		6.	96	61		4		38	347
174	246		19	46	27	30	58	23	355	88	68	99	.357
34	61		120	61	4	· oc	98	E		18		35	566 1.
24	27	-	× 7.	21	60	20		r-	ا ع		- rc	16	216
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1,102	1,797		159	312	137	157	386	189	146	175	23.6	381	9,312
310	192		10 cr	7		4	28	10	48	44	52	40	1,432
			7.7	30	24	- ×	35	44	152	=	15	100	1,130
00 67	101					P4	00	2	10	60	63	2	69
16	122			-	60	4	=	-	60	C1	-	00	165
34	110		12 .	124	6	16	44	1	10	9	34	83	129
180	305		35.0	2	153		453	50	08			28	1,477
490	750		25.	156	-1	06	866	87	23	93	98	200	217
13 A	1 63			15			-	6.1	-	6	ହା ।	00	100
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North'd, North'd,		North'd,	North'd, North'd,		North'd,	North'd,	North'd,	North'd,	North'd,	North'd,	North'd,	North'd.	
Mineral Railroad and Mining Co. Cameron, Zuke Fidler,	Totals,	Buck Ridge Coal Co.	Excelsior Coal Co. Corbin.	Totals,	White and White Columbia No. 2,	Llewellyn Mining Co.	Enterprise Coal Co.	Shipman Koal Co.	Mount Carmel,	Stoux, Seneca Coal Co.	Greenough Red Ash	Shamokin Coal Co.	Grand totals,

TABLE 3-Recapitulation

	Grand total inside and outside	0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.0
side	rotal outside	660 660 660 660 660 660 660 660 660 660
Employed Outside	All other employes	2888812888245484 689
ployed	Thuk-keepers and clerks	200000000000000000000000000000000000000
ns Em	(nem) stekhold chill	υ δο ο ο ο ο ο ο ο ο ο ο ο ο ο ο ο ο ο ο
Persons	(stod) steklets (boys)	3484 81687 27888888
Occupations of	Engineers and firemen	88 8 1 8 8 1 8 8 8 8 9 9 9 9 9 9 9 9 9 9
tion	Placksmiths and carpenters	58.24 - 51 c c c c c c c c c c c c c c c c c c
cupa	uamanoj apism,	는 제 20 m 31 m 34 m m 4 m 4 m 4 m 6 1
00	strabratariages	Summeren en S
	əbisni laJoT	2, 2, 2, 2, 2, 2, 2, 2, 2, 2, 2, 2, 2, 2
side	All other employes	628 564 14 44 48 44 48 44 44 52 40 40 40 40 40 40 40 40 40 40 40 40 40
ed In	C'onipany men	265 641 641 20 20 20 20 20 20 20 20 20 20 20 20 20
Persons Employed Inside	<b>u</b> əməining	69 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 -
ons E	Door-boys and helpers	. 6288
Pers	Drivers and runners	25 - 25 - 25 - 25 - 25 - 25 - 25 - 25 -
o suc	Miners' laborers	\$2.50 \$2.50
Occupations of	sten!M	88.88 88.88 88.8 88.8 88.8 88.8 88.8 8
000	Fire bosses and assistants	8 m 6 m 1 m 1 m 1 m 1 m 1 m 1 m 1 m 1 m 1
	Assistant mine foremen	61517
	Mine foremen	C140) ::::::::::::::::::::::::::::::::::::
	County	NNNNNNNNHH
	Names of Operators and Collieries	P. and R. Coal and Len Co., Susquelanna Gad Co., Mineral Katherad and Mining Co., Brock Reige Gad Co., Excession Coal Co., Ulweller and White, Lleweller Mining Co., Shipman Kead Co., Shipman Kead Co., T. M. Lither and Co., T. M. Lither and Co., Grenough Red Ash Coal Co. Grenough Red Ash Coal Co. Shamokin Coal Co., Shamokin Coal Co., Totals,

TABLE 3-Continued

					Number of Days Worked Each	of Da	ys Wor	ked Ea	ch Month	th in E	in Breaker			
Names of Operators and Collieries	County	Vanual	<b>Р</b> ергияту	Матећ	April	Мау	June	July	JenguA	September	October	November	1อนุเมอง-ญ	IstoT
Philadelphina and Reading Coal and Iron Co. Henry Clay,	North'd			26	26	22	25.7	16.7	16.3	18.8	14.9	17.2	18:	20,4
Sterling.	North d	28	22.5	26	24.8	23.8	25.4	24 5	25.4	22.9	16	18	19	274
Bear Valley, North Franklin, Locust (38p,	North'd North'd	24.8	21.9 22.1 19.8	24.6	21.1	23.24	25.8 26.8	888	- «	8335	15 9	18	483	\$E.5
Locust Spring, Reliance, Alaska,	North'd,	25.25.8	21.9	20.9	18.3	21 fc 22.S		23.6			21.1	17.9		2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2
Averages,		24.3	21.8	24.1	21 1	× 75	25.2	23 2	9.0.5	21.7	18	17.5	. 4	12.51
Susquehanna Coal Co. Union Collieries Pennsylvania, Richards, Hickory Kidge, Hickory Swamp,	North'd North'd North'd	22.8 23.5 19.7	20.9 20.4 21 16.3	22.5.6 19.7	2222	2522	25.25.25 2.15.25.25 2.15.25.25 2.15.25.25 2.15.25.25 2.15.25.25 2.15.25.25 2.1	23 4 5 11 6 11 6 11 6 11 6 11 6 11 6 11 6				0.00 % F	827±	1 21-52
Averages,		22.3	19.1	22.5	21.5	21.4	22 :	23.5	21.3			8.1	17.	2m1
Mineral Railroad and Mining Co. Cameron, Luke Fidler,	North'd,	23.5	61 51	23.5	22.7	22.12	728	22 9	23.83	20.1	19.8	21.8	19 ::	267
Averages,		22 3	21.4	8.53	23.7	21.7	23.5	23.5	23.5		18.8	21.2	18 ::	343
Excelsior, Corbin, Corbin,	North'd,	24.7	30.8 32.6	6163 6166	17.2	8161	23.5	25.1	23.7	61 61 62 46 62 86	22 22	17.3	17 17 22 22	27.9
Averages,		25.3	21.7	24.3	8,8	25 2	24	24.9	23.7	23.8	21.2	17.3	17.5	292
White and White Columbus No. 2.	North'd	25.1	17.6	13.6	9	15.3	17.5	14.9		14.7	13	15.2	20 f	194

TABLE 3-Continued

	1	241	232	142	===	213	278	152	221
	Totals								
	December	19	15.4	20.4			21.7		18.8
	November	17	14.1	22.2	10.2	11.4	21		16
reaker	October	16	16.4	14.1	12.4	14	23.4	a	17
h in B	September	22	19.5		14.4	21.6	24.7	30	20.3
h Mont	1suguA	23	19.9		1 21	23	23.9	12	19.9
red Eac	July	21	19		18.7	25.1	25.1		21.9
's Work	əunr	22	21		24.8	24.2	24.8		22.9
of Day	May	14	20	9	24	11.7	22.3	50	18.5
Number of Days Worked Each Month in Breaker	firqA	20	18.1	17.1	22	9.6	21.7	22	19.2
A	Матсћ	27	22.3	20.1	26.8	25.1	23.8	18	22.6
	February	22	21.9	19.9	23	24.4	21.2	23	21.3
	January	18	24.8	22.3	27.1	23.7	24.2	19	23.3
	County	North'd,	North'd,	North'd,	North'd,	North'd,	North'd,	North'd,	
	Names of Operators and Collieries	Llewellyn Mining Co.	Enterprise Coal Co.	Colbert, Shipman Koal Co.	T. M. Righter and Co.	Sioux, Seneca Coal Co.	Greenough Red Ash Coal Co.	Shamokin Coal Co.	Averages,

TABLE 3-Recapitulation

	Totals	82222222222222222222222222222222222222
	December	812819112 :5   8 82819112 :5   8
	November	8.8.2.2.2.2.2.2.1.1.1.1.1.1.1.1.1.1.1.1.
reaker	TedotoO	18. 18. 18. 19. 19. 19. 19. 19. 10. 11. 11. 11. 11. 11. 11. 11. 11. 11
th in B	September	20 24 1 19 27 27 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2
h Mont		211222123
in Eac	July	88882122 N988 19
Worked	9unf	22.22.122.1 21.1.2.122.122.122.122.122.1
Days	May	22222215 6 21122 81 5 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2
Number of Days Worked in Each Month in Breaker	firqA	221 1 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2
Z	Матећ	22.1 22.1 22.1 22.1 22.1 22.1 22.1 22.1
	February	22.2 22.2 22.2 22.2 22.2 22.2 22.3 22.3
	January	22 22 22 22 22 22 22 22 22 22 22 22 22
	County	North d. North d. North d. North d. North d. North d. North d. North d. North d. North d. North d.
	Names of Operators and Collieries	Philadelphia and Reading Coal and Iron Co. Susqueehand Coal Co., Excelor Coal Co., Excelor Coal Co., Liverlyn Minite, Liverlyn Minite, Enterpuise Coal Co., T. M. Nighter and Co., T. M. Nighter and Co., T. M. Nighter and Co., The Coal Co., T

TABLE 4.—Fourteenth Anthracite District, 1903. Fatal Accidents in and about the Mines

	1					
Nature and Cause of Accident in Brief	Killed by fall of top coal.  Anthered in breast by manway breaking and drawing him down middle of breast.  Killed by fall of top slate.  Both legs broken and injured internally by being caucitt in scraner ine.	next day. Killed by fall of top rock. Killed between empty car and face of gangway.		night.  Miled by fall of top rock.  Killed by fall of top rock.  Killed by fall of top rock.  Killed by fall of top rock.  Killed by fall of top rock.  Killed by fall of top rock.  Killed by rush of manne.	ings. Killed by rush of water from old work- lings. Killed by fall of top slate. Killed by fall of top coal.	Killed by fall of top slate.  Killed by fall of top coal.  Killed by fall of top rook.  Two ribs broken and ankle bruised by fall of coal. Died on 16th.  Killed by fall of top rock.
County	North'd, Sr North'd, Sr North'd, B			North'd, North'd, North'd, North'd, North'd, North'd, North'd, Sh	North'd, K	
Name of Colliery	North Franklin, Cameron, Bear Valley, Reliance,	Excelsior, Excelsior,	North Franklin, Henry Clay,	Henry Clay, Alaska, Alaska, Scott, Cameron, Sterling,	g, Oak, Fidler,	
Number of orphans	00 : 10 :	::-	·	(a)	: 60 67	10
swobiw to redmuN	H : H :		1 ::	en : : :		
Married or single	N. N. N. N. N. N. N. N. N. N. N. N. N. N	<i>თ</i> . <i>ω</i> . ≥		www.		K KKivix
- 93A	26 26 18 18	233		8 22223		2524 8
Occupation	Miner, Miner, Laborer,	Miner, Laborer,	Driver,	Miner, Laborer, Laborer, Laborer, Miner,		Laborer, M ner, Miner, Miner,
Nationality	German, Austrian, Polish,	Polish,	English,	Polish, Polish, Polish, American,	English, Polish,	German, German, Polish, Polish,
Name of Person	Martin Wilkie, William Bevsie, Joseph Gessick, William Haas,	Jacob Labol, John Taby, William Price	Robert Heath, Frank Grella,	John Beleofski, Anthony Baides, John Kulick, Benjamin Rowers, William Krigbaum,		Antony Mitter, Peter Shaffer, Frank Rososkie, Lawrence Kurtz, Joseph Vesnefski,
Date of accident	10 12 20 27	7 18		6 6 4 4 5 5 5 6 6 4 4 5 5 5 5 5 5 5 5 5		85 12 38 8 24 38
	Jan.	Feb.	March		April	May

. Head hadly bruised by premature blast.	While going under shaker shaft his cloth- ing caught on set serew, turning him around the shaft, striking his head	MXX	Nilled by falling down breast manway,	Killed by fall of top rock. He had fired	a shot are smoken; when he returned to the face the rock. I fall on him to being hit with a piece of slate from the top on the heard, while replace from the rop on the heard, while replace the cut of the control of the heard.	same day. Injured about the head by a piece of a place of a state she rail which was in his cap, as a	picker, into his skull; deed same day.  Killed by two enjoy cars running over hm They came down the slone with-	out the rope being attached.  Killed by being caught between car and	Les and arm by ken and injured intern-	Died same night of the car on ton of besoker at aught by mine car on ton of besoker at aught by mine	Killed by fall of ton rock.  Killed by fall of ton rock.	the free and while drailing in the ceal makes the piece of Gold It fell on him.  Killed by being slot. He had it a sumb and gone to place of safety, telpolyse that the south had missed fire.	Went the h Ken d Kill d Straine	Killed by explosion of gas. He entered by we that place there with a maked light on his local before the fire hoss made an examination, and encountered a body of gas.
North'd,	North'd,	North'd, North'd,	North'd,	North'd,	North'd	North'd,	N. ruh'd,	North'd,	North'd	North'd,	North'd,	North'd,	North'd,	North'a
Die Mountain,	Hickory Ridge,	Purnside, Pennsylvania, Enterprise,	Sioux,	Reliance,	Pennsylvania	Corbin.	Richards,	Locust Gap,	Enterprise,	Richards,	Luke Fidler, Alaska,	Columbus No. 2,	Pennsylvania, Cameron, Lecust Spring,	Big Mountain,
:	:	: :63	2	10	:	:	:	:	:	:	60.61	6.1		6.1
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. 40	16	42.22	861	40	- 46	£5	30			95	25.61		81818	
Miner,	Tending shakers.	Miner, Miner, Miner,	Miner,	Miner,	Loader,	Miner,	Laborer,	Laborer	State picker	Pushing coal	Miner.	Miner,	Carpenter, Miner, Topman,	Miner.
Polish,	American,	Irish, Polish,	Polish,	Hungarian, .	Polish,	Russian,	Polish	Polish	Polish,	Slavonian, .	Greek,	Slavonian, .	American, Austrian, German,	American,
Steven Yanchar	Ralph Helt,	Daniel Curran, Stany Stancovitch, John Smoogers,	Anthony Kurzan,	John Consavitch,	Louis Rouble,	John Gogolinskie,	Anthony Domanski,	Kalos Molashefski,	John Comyock,	August Letspaw,	Harry Wistonefski,	George Balash,	Charles Klinger. Februa Zerd. Friest Miller,	Henry Zartman,
60	15	266	00	17	563	23	6.0	4	17	19	23 23	18	% %	18
May	June	July					Aug.				sept.		Nov.	Dec.

TABLE 5.—Fourteenth Anthracite District, 1903 Non-Fatal Accidents in and about the Mines

Nature and Cause of Accident in Brief	Hand lacerated and one ear amputated by	Three ribs broken by timber rolling on	Two teeth and one eye blown out by ex-	Arm broken and head cut by breast man-	way giving away.  Log briken; bumped between mine cars.  Fracture of pelvis by fall of trop sinte.  Ifack and legs burt by fall of top coal.  Arm broken; bumped between mine car	and timber. Cut over eye and leg bruised by fall of	Sadly bruised by falling down breast. Leg broken; bumped between mine cars, collar bone broken; caught between mine	Leg broken; caught between locomotive	and mine car.  Leg broken by fall of top slate.  Arm broken by falling off rallroad car.  Three fingers blown off by explosion of	Foot broken by fall of top coal. Roth legs broken by being caught between	Back but and injured internally by fall of top coal.
County	North'd,	North'd	North'd	North'd,	North'd, North'd, North'd,	North'd,	North'd, North'd,	North'd,	North'd, North'd,	North'd,	North'd,
Name of Colliery	North Franklin,	Richards,	Richards,	Burnside,	Natalie,	Hickory Ridge,	Richards, Burnside, Richards,	Richards,	Reliance Pennsylvania, Greenough,	Natalle, Locust Gap,	Richards,
Mariled or single	υż	υż	M	Z	Z w Z w	×	N Z Z	M	ZZZ	හා යා	M.
98 <i>t.</i>	28	21	35	28	2888	26	22.55.22	53	3333	25	35
Occupation	Laborer,	Laborer,	Laborer,	Miner,	Bottom man, Miner, Miner, Loader,	Miner,	Miner, Laborer, Laborer,	Engineer,	Miner, Laborer, Laborer,	Miner, Driver,	Miner,
Nationality	Polish,	American,	Italian,	American,	American, Polish, American, Polish,	Polish,	Polish, American,	American,	Hungarian, Polish,	American,	American,
Name of Person	Stany Bolaskie,	Edward Davies,	Frank Petel,	William Engle,	Herbert Hornberger, John Cutroscavitch, George Strauser, John Lacofski,	Mott;s Koposkie,	John Redock, David Zartman, John Kesler,	Thomas Miles,	Theodore Covalick, John Gala, George Garber,	James F'anigan,	Robert Balmbridge,
Date of accident	Jan. 9	21	30	22	Feb. 7	March 3	4100	£-0	14 21	April 16	21

Leg broken and hip dislocated by being	And Over by mine cars. And broken; run over by mine car on slope.	Leg tractured by being caught in scraper line.  Lorg fractured by fall of top state.  Lorg broken by fall of top coal.  Lorg broken by fall of top coal.  Arm lacewated by being caught on shaft.  While dressing off a shot a, piece of coal	While putting coal in chute a lump rolled	on him, injuring his back. Injured about the body by coal from a	Dislocation of hip by being run over by	nume cars on top of sole.  Foot crushed by the ladded cars running over H; he went to bottom of slope, and was hickling on loaded cars, when he had cars and show the care country to bottom of slope, and was hickling on loaded cars.	when his root caught between fan and gurd fail.  Leg broken by being caught in rope wheel. Severely injured about head and body while riding up slope. Was caught be-	tween mine car and timber.  Leg broken by fall of coal in breast.  Ribs broken and back bruised by fall of	Left arm tern off by being caught on	Shair in Dreaker. Shair in Dreaker. Leg broken by being bumped between	Arm cut and foot crushed by fall of rock. Internally injured by being run over by		while working under it, crushing him about the body and hips. He had one hole tamped and while gathering tamping for another his lamp came in contact with the squib in the	other, setting it off, seriously injuring his head, arms and side. Went up a chufe to start coal, when the	coal rushed on nim, breaking his leg. Fell down breast manway, badly bruising his head and body.
North'd,	North'd,	North'd, North'd, North'd, North'd, North'd,	North'd,	North'd	North'd,	North'd,	North'd,	North'd,	North'd,	North'd,	North'd,	North'd,	North'd,	North'd,	North'd,
Pennsylvania,	Locust Gap,	Sioux, Richards, North Franklin, Pennsylvania, Burnside, Reliance,	Reliance,	Sloux,	Corbin,	Sterling,	North Franklin, Richards,	Greenough,	Natalie,	Cameron,	Mt. Carmel,	Enterprise,	Reliance,	Cameron,	Burnside,
vi.	∑ vi	ZZwww	M	M.	M.	ν <u>ά</u>	တ် ဟ်	MM	υż	M.M.	vi vi	M.	vi	M.	M.
. 22	155	2822833	. 42	. 55	. 36	55	. 20	. 555	17	. 330	. 33	37	30	32	36
Miner,	Repairman,	Laborer, Miner, Miner, Oiler, Miner,	Miner,	Laborer,	Miner,	Pumpman,	Chute tender,	Miner,	Slate picker,	Miner,	Laborer,	Miner,	Miner,	Loader boss,	Miner,
Austrian,	American,	Irish, Polish, Polish, American,	Hungarian, .	Irish	English,	English,	American, Italian,	Polish, Hungarian, .	Polish,	American,	Italian,	Polish,	Hungarlan, .	American,	Polish,
21 Joseph Valentine,	John Debo, Dale Shellenberger,	Patrick Dougherty, Peter Savage, Stany Bolaskie, Adam Molley, Joseph Conrad, John Smith,	Joseph Runkers,	James Cunningham,	James Eaton,	Steven Garbutt,	Monroe Heim, Frank Amores,	Joseph Keefer,	Gust Zelinskie,	20 Charles Weaver,	John Valentine,	Anthony Grego,	Walter Rozinskie,	11 John O'Neil,	22 George Gancofskie,
21	S ~	######################################	17	61	51	23	16	12	600	12 20	23	00	10	11	67
April	May	June					July		Auk.			Sept.			

TABLE 5-Continued

Nature and Cause of Accident in Brief	Flesh torn off his leg by being caught by	#Q	Slight tracture of skull; while pulling a car off the dump it got off the track		in the abdomen. A piece of ctal rolled down slope and extract him dislocating his ankle	Arm broken. A piece of rock fell off the sinking bucket in new shaft, striking	him on the arm above the elbow Leg broken; barring down a piece of clod, when it fell on one end of drill.	the other end striking nim on his leg.  Leg broken; he was putting in a battery in the chute, when a piece of coal slid  down on the sheet from and caught his	leg against the rib.  Hip dislocated and scalp wound by fall	Fine court off: bumped between cars. While putting water on the ash bank that was on fire, he approached the	bank too close With the nozzle scalled himself. Injured about the back and hips by of coal.
County	North'd,	North'd,	North'd,	North'd,	North'd,	North'd,	North'd,	North'd,	North'd,	North'd,	North'd,
Name of Colliery	Locust Spring,	Burnside,	Mt. Carmel,	Greenough,	Enterprise,	Enterprise,	Luke Fidler,	Natalie,	Greenough,	Alaska,	North Franklin, North'd,
Married or single	vi	တ် တ်	×	υż	×	ω	M.	Z	M	တ် တဲ့	M
Age	- 22	22 20 20	53	. 21	. 25	- 50	- 12	47	9		20
Nocupation	Driver,	Driver,	Laborer,	Car runner,	Miner,	Laborer,	Miner,	Brattice man,	Miner,	Driver,	American, Miner,
Vationality	American,	German,	Lithuanimn,	American,	Polish,	Russian,	Russian,	American,	Russian,	Polish,	American,
Name of Person	Thomas Ginley,	John Drumheller,	Frank Cherlnufskie,	Dennis McLaughlin,	George Yohan,	Nick Maramo,	Andrew Covelskie,	Manuel Adams,	Ralph Boginskie,	Juseph Zero, Mike Novey,	Henry Richold,
Date of accident	Sept. 29	29	Oct. 5	i,	ø	12	М	22	Nov. 2	23 %	Dec. 3

Dec 7 Hugh Donaghue, American, Car runner, 21 M. Luke Fidler, North'd, Head and chast squeezed: caught between	M Richards, North'd, Burned by explosion of gas in his breast.  M Richards, North'd, Burned by explosion of gas in his breast.  S. Henry Clay, North'd, Finzer cut off while coupling cars while	on motion. Ser ansate of gas. He went up his breast Ordere the fire 5, ss	minds in eventuation with a maked light on his head do broke his arm, top of shaft.
North'd,	North'd. North'd.	North'd,	
Luke Fidler,	Richards, Richards, Henry Clay,	Big Mountain,	American, Engineer, 48 M. Henry Clay, North'd
M.	NE of	M	×
21	32 28 23	f	
Car runner,	Miner, Miner, Loader,	Miner,	Engineer,
American, .	American, American, Polish,	American,	American,
Hugh Donaghue,	11Frank DonnellyAmericanMiner28MRichards11Ralph MarchettAmericanMiner28MRichards18Joseph BoshinskiPolishLoader28SHenry Clay	18 Edward Zartman, American, Miner, 47 M Big Mountain, North'd,	24 Daniel O'Brien,

# CONDITION OF COLLIERIES

### PHILADELPHIA AND READING COAL AND IRON COMPANY

### Alaska Shaft

General condition of drainage fair. Ventilation requires improve ment in some parts of the mines.

# Reliance

General condition of the mines satisfactory.

# Locust Gap

In fair condition as regards to drainage, but the ventilation requires improvement.

# Locust Spring

On my last visit to this colliery I found the condition as regards to drainage fair, but the ventilation in some parts of the mine was unsatisfactory. The officials however were making an effort to improve the ventilation by driving holes through to the surface.

# Sterling

I have partly inspected this mine and found the sanitary conditions fair.

# Henry Clay

Condition of this colliery as regards to drainage is good and ventilation is fair.

# Big Mountain

Condition of this colliery as regards to drainage and ventilation is fair.

### Burnside

I have partly inspected this mine and find the sanitary conditions fairly good.

# Bear Valley

I have partly inspected this colliery and find the drainage good, but the ventilation is inadequate in some parts of the mines. The officials, however, are erecting a new fan which will improve the conditions materially.

# North Franklin

On my last visit to this mine, I found the drainage good, but the ventilation in some parts of the mine was very unsatisfactory, owing entirely to the improper distribution of the air, as the quantity en-

tering the inlet is ample. I called the attention of the superintendent to the matter, and was informed by him later that it had been attended to and properly ventilated.

# SUSQUEHANNA COAL COMPANY Pennsylvania

General condition of this mine fair.

Richards

Ventilation and drainage fair.

Hickory Ridge

General condition of this mine fair.

Scott Shaft

Has not worked any since I have been in office, and is full of water.

# Hickory Swamp

I have made part inspection of this mine and found the ventilation to be inadequate, but the officials are making every effort to improve the conditions. Drainage fair.

# LLEWELLYN MINING COMPANY

# Royal Oak

On my last visit to this colliery I found the ventilation to be inadequate, but they were driving an air hole through to surface which will better the conditions. Drainage could also be improved.

# GREENOUGH RED ASH COAL COMPANY Greenough

Ventilation and drainage good.

# Enterprise COAL COMPANY Enterprise

When I visited this colliery last, the drainage was very unsatisfactory, also the ventilation was in a very bad condition, being neglected by the officials in charge. There is ample quantity of air entering the mine, but no effort made to properly distribute it. They have also neglected to put in stoppings between their intake and return airways.

# T. M. RIGHTER AND COMPANY

# Mount Carmel

On my last visit to this colliery I found the volume of air to be sufficient, but not properly distributed and not being carried to the face of the workings in some parts of the mine. Drainage fair.

### SENECA COAL COMPANY

Sioux

Ventilation and drainage fair.

# WHITE AND WHITE Columbus No. 2

Ventilation and drainage fairly good.

# SHAMOKIN COAL COMPANY

Natalie

As far as inspected I found the sanitary condition fair.

### EXCELSIOR COAL COMPANY

Corbin

Sanitary conditions fairly good.

### Mine Foremen's Examinations

The annual examinations of applicants for mine foremen's and assistant mine foremen's certificates in the Fourteenth Anthracite district were held at Pottsville, in April and August, and the following applicants were successful in passing the examination:

# Mine Foremen

John Allen, Mt. Carmel; Michael J. Brady, Mt. Carmel.

# Assistant Mine Foremen

George Davies, Mt. Carmel; John L. Rupp, Shamokin; Patrick Walsh, Shamokin; Peter Emschweiler, Shamokin; John Duncheskie, Shamokin; John Miller, Shamokin; Maurice Cashman, Shamokin; John Stone, Mt. Carmel; Thomas Butts, Mt. Carmel; Patrick Doyle, Mt. Carmel; Alfred Martin, Mt. Carmel; Philip Gallagher, Mt. Carmel; James Manney, Mt. Carmel; John L. Manney, Mt. Carmel; Thomas Edwards, Locust Gap; Thomas J. Gallagher, Locust Gap; James Burns, Excelsior; Francis P. Kurtz, Treverton; Michael F.

Daley, Shamokin; Celeste Ecker, Shamokin; Michael Fitzpatrick, Shamokin; David Anderson, Shamokin; Michael Reiland, Burnside; Michael Moore, Bear Valley; William Quinn, Shamokin; John E. Brecker, Shamokin; Joseph Berk, Shamokin; Joseph H. Reiland, Burnside; John Schreftler, Shamokin; James Lynch, Shamokin; Richard Fetter, Shamokin; Edwin C. Jones, Shamokin; Patrick J. Cavanaugh, Shamokin; Elijah John, Shamokin; George F. Sharpe, Shamokin; William H. Jones, Shamokin; George L. Martz. Shamokin; John Moore, Shamekin; Edwin Ivatz, Shamekin; John Bruskie, Mt. Carmel; George Homer, Shamokin; John E. Labey, Shamokin; Herbert W. Richards, Shamokia; William McFadden, Mt. Carmel; Felix Koshinski, Shamokin; George W. Whearey, Shamokin; Daniel Jones, Shamokin; Oliver Snyder, Shamokin; James Oates, Shamokin; George Markle, Shamokin; Andrew Smith, Shamokin; William Reichwine, Hickory Ridge; John A. Schlader, Shamokin; Lewis Richards, Hickory Ridge; John Joraskie, Mt. Carmel; John Simmendinger, Shamokin; Harry T. Schrawder, Shamokin; James Scott, Shamokin; Alfred H. Osman, Shamokin; William O'Brion, Mt. Carmel; Joseph D. Ramsey, Shamokin; John Nozisko, Mt. Carmel; William J. Waugh, Shamokin; James Golden, Shamokin; Joseph Brewer, Shamokin; Lawrence Brennen, Shamokin; John Ready, Shamokin; Thomas W. Farrell, Shamokin; George Bainbridge, Shamokin; John A. Meisberger, Shamokin; John J. McDonald, Locust Gap; Charles W. R. Henninger, Shamokin; Staney Wyakopki, Shamokin; Isaiah F. Stoop, Shamokin; Patrick Cawley, Shamokin; W. B. Fisher, Shamokin; Thomas A. Evans, Mt. Carmel; Lewis Williams, Mt. Carmel; Harrison Bailey, Mt. Carmel; John Lafferty, Shamokin; George Kenaer, Mt. Carmel; John Carmitchel, Mt. Carmel; Austin Singley. Mt. Carmel; Thomas Price, Shamokin; Melvin Fisher, Shamokin; John Madden, Shamokin; Wally Delaware, Shamokin; Anthony Trefsger, Mt. Carmel; David J. Williams, Mt. Carmel; Edward Manning, Excelsior; John Klinger, Shamekin; Thomas Rowe, Mt. Carmel; James Pugh, Shamokin; John Clarke, Shamokin; Henry Rhoads, Mt. Carmel; W. H. Cleaver, Shamokin; Walter Walters, Treverton; Adam Bruskie, Shamokin; Anthony Brovey, Shamokin; Mandus Henninger, Shamokin; David Rowe, Mt. Carmel; Patrick H. Carroll, Mt. Carmel; David B. Williams, Mt. Carmel; George W. Rupp. Shamokin; William Lubold, Shamokin; Walter Zielinskie, Mt. Carmel; John Rodgers, Mt. Carmel; Robert Williams, Mt. Carmel; James O'Rourke, Treverton; William J. Daley, Shamokin; E. L. Snyder, Shamokin; S. E. Kulp, Shamokin; Walter Grabuski, Shamokin; John R. Jones, Shamokin: Arthur Leware, Shamokin; William X. Martin, Mt. Carmel; Andrew J. Madden, Mt. Carmel; Lawrence Sands, Shamokin; Jere W. Raker, Treverton; James E. Quinn, Shamokin; Amos Kramer, Shamokin; Thomas Shaw, Treverton; William Kelly,

Shamokin; Harry Finn, Shamokin; John J. McCabe, Shamokin; Matthew Hunt, Mt. Carmel; George Brokenshire, Mt. Carmel; Henry A. Osman, Shamokin; Oliver Zeigler, Shamokin; John Holler, Shamokin; George Schroyer, Shamokin; George Young, Shamokin; Sylvester Knorr, Shamokin; Frank Dormer, Shamokin; Francis Taby, Shamokin; Henry Trefsger, Mt. Carmel; Andrew Carmitchel, Mt. Carmel; Harry Warfield, Mt. Carmel; John Kehoe, Mt. Carmel; E. A. Brennan, Shamokin; Jesse C. Hoover, Shamokin; Peter Summers, Mt. Carmel; John W. Sokloski, Mt. Carmel; Patrick McGrath, Mt. Carmel; Patrick Kelly, Mt. Carmel; William E. Manney, Mt. Carmel.

# Fifteenth Anthracite District

COLUMBIA AND DAUPHIN COUNTIES

Ashland, Pa., February 15, 1904.

Hon. James E. Roderick, Chief of Department of Mines:

Sir: I have the honor of herewith submitting my annual report for the year ending December 31, 1903. Statistics regarding production, employes, days worked, condition of collieries, etc., are given in accordance with the requirements of the law. There were 11 fatal and 46 non-fatal accidents during the year, a brief account of which is embodied in the report.

Respectfully submitted,

MARTIN KELLY,

Inspector.

# Fifteenth Anthracite District, 1903.

# SUMMARY OF STATISTICS

Number of mines in district,	7
Number of mines in operation,	6
Number of tons of coal produced,	1,863,280
Number of tons shipped to market,	1,556,439
Number of tons sold at mines to local trade,	31,379
Number of tons consumed at mines in generating steam	
and heat,	$275,\!462$
Number of persons employed inside the mines,	2,710
Number of persons employed outside,	1,666
Number of fatal accidents inside the mines,	8
Number of tons produced for each fatal accident inside,	232,910
Number of persons employed per fatal accident inside,	339
Number of fatal accidents outside,	3
Number of persons employed per fatal accident outside,	555
Number of wives made widows by fatal accidents,	5
Number of children orphaned by fatal accidents,	13
Number of non-fatal accidents inside of mines,	33
Number of persons employed per non-fatal accident	
inside,	82
Number of non-fatal accidents outside,	13
Number of persons employed per non-fatal accident	
outside,	128
Number of steam locomotives used inside,	1
Number of electric motors used inside,	5
Number of fans used for ventilation,	15
Number of gaseous mines in operation,	. 4
Number of non-gaseous mines in operation,	2

# TABLE A.—Fifteenth Anthracite District, 1903 PRODUCTION OF COAL

Names of Companies	Tons
Lehigh Valley Coal Company,	$365,\!662$
Midvalley Coal Company,	463,822
Philadelphia and Reading Coal and Iron Company,	379,359
Summit Branch Mining Company,	306,461
Lykens Valley Coal Company,	347,976
Total,	1,863,280
Production by Counties	
Columbia,	1,208,843
Dauphin,	654,437
Total,	1,863,280

TABLE B.—Fifteenth Anthracite District, 1903

Fatal and non-fatal accidents; number of tons of coal produced per accident; number of persons employed; number employed per accident

	AUDION IN TO TO	31 103 267 128
abisi	Number of employes out	
ebisi	Number of employes our	55 135
əpisi	Number of employes in per non-fatal accident	120 93 67 122 82
əbisı	Mumber of employes in per fatal accident	160 199 286 339
8	Total number of employe	729 825 682 933 1,207 4,876
9pis	Number of employes out:	249 225 308 534 350 1,666
əpi	Number of employes ins	480 600 374 399 857 2,710
ner Der	Tons of coal produced anorthing	33,242 92,764 94,840 51,077 49,711
per	opposed foos to smooth for the first specification of the foother specification of the foother for the foother for the foother for the foother for the foother for the foother for the foother for the foother for the foother	121, 887 153, 231 115, 992 232, 910
oidents	IstoT	100 100 100 100 100 100 100 100 100 100
Non-Fatal Accidents	əbistuO	12 52 00
Non-F	əbiznI	111 6 6 6 6 7 7 233
ents	TetoT	
Fatal Accidents	əbistuO	eo   eo
Fata	ebianI	m 01m 00
	Names of Companies	Lehigh Valley Coal Co.,  Midvalley Coal Co.,  Philadelphia and Reading Coal and Iron Co.,  Summit Branch Mining Co.,  Lykens Valley Coal Co.,  Totals and averages for district,

TABLE C.—Fifteenth Anthracite District, 1903 Classification of Fatal Accidents

		Grand total	=== := := : = :   =	
			- cı (cı	_
		Tetal outside		
nes		Miscellaneous causes		
f Mi		By boller explosions		
Outside of Mines		By suffocation		-
Out		Dy machinery		
		Dr cars		
		Total inside	H H H COH 00	
		Miscellaneous causes	-	-
		Suffocated by coal, etc.		-
		By mules		_
		Crushed at batteries		_
	Into	Manways, breasts, etc.	4 4 61	-
e s	By Falling Into	Slopes		-
Inside of Mines	By F	Shafts		
side o		By blasts, etc.		
In		Powder and dynamite	61 61	_
		Smothered by gas		-
		By explosion of Eas		-
		By mine cais		
	jo	100A		
	By Falls of	Siate	2 1	
	By	Coal		_
			January, February, March, April May June June June June Coctuber, December, December,	

TABLE D.— Fifteenth Anthracite District, 1903 Classification of Non-Fatal Accidents

		Grand total	04314HF@06F000H 8
		Spishuo fstoT	ESIGNED HEORGE   M
les		Miscellancous causes	F(0) (F(F) (0) (1) (F)
of Min		the poiler explosions	
Outside of Mines		Dy suffocation	
no		Ву тяс-йіпету	©1 H 44
		Py cars	61
		Spiral fatol	3) 0] (0 (= (2 A) (2 — (2 ) — (2)
		sesure stroenfleesik	
		Sufforated by coal, etc.	
		By mules	
		Crushed at batteries	
	ng Into	Manways, breasts, etc.	
ines	By Falling Into	sodols	
Inside of Mines	By	stlads	
Inside		By blasts, etc.	. c)   c)
		Powder and dynamite	
		Shrothered by gas	- Tu
		By mine cars	
	Falls of	91st2	e e e e
	By F	Coal	Het Het 0
		·	
			January, March, March, May June, June, June, October, Docember, December,

Occupations of Persons Killed or Fatally Injured Inside and Outside the Mines TABLE E.-Fifteenth Anthracite District, 1903

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1	[8] 1 (Minit)		11
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	and three times they	1	5.1
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0	(प्रवा) इम्पुवर्ष स्) धरु		:
Outside	Slute Liekers (beys)		
	Engineers and fremen		-
	Film bemiths and earpenters		
	nomeret a plant.		
	shooting adouts		
	əbisni lnt-T		00
	səyelqarı aədi - 1.7.		-
	(,-inbank men		¢1
	uəmhmə,		
	stadfall bits at d-real		
Inside	sadamia dan saaveet		
	are and a strail.	, - , , , , , , , , , , , , , , , , , ,	90
	ZTMIIA		01
	Tire besser and assistants		
	namered adim matrices.		
;	мііпе (отеплеп		
		Limitory: Rodonaery March, Aprill Voly, Ulare, Loly, An unit	Totals,
1		Linurary, Medistrany, March, April, May, May, May, March,	Totals,

TABLE F.—Fifteenth Anthracite District, 1903 Occupations of Persons Injured Inside and Outside the Mines

	Grand total	0.40444-0707-0004-04
	Potal outside	Edual Heda E
	All other employes	H 31H H 31   12
_	Book-keepers and clerks	
-	Slate pickers (men)	
_	Slate pickers (boys)	H H H   4
-	Engineers and fremen	
-	Blacksmiths and carpenters	2
-	Outside foremen	
	Superintendents	
	Spismi [st/T	6161 00 F-104-10 H-10 H-100
-	All other employes	
-	Company men	
-	Pumpmen Pumpmen	
_	Door-poys and helpers	
_	Drivers and runners	64 EEE 10
-	Miners' laborers	H 44-H 50
-		21 LOS LOS L. ST
	Pire bosses and assistants	-   -
-	Assistant mine foremen	
3	Mine foremen	
		January, February, Adarh, April May, June, June, July, Seltember, October, December, Totals,

# TABLE G .- Fifteenth Anthracite District, 1903

Nationality of Persons Killed or Fatally Injured Inside and Outside the Mines

	can		u	ndan	an .	
	Anterio	Irish	German	Lithua	Austria	Totals
anuary	1					
ebruary,				1		
larch,		1				1
pril,						
lay,						
une,ulv.	1					
			,			
	1		_		1	
ecember,						
Totals,	7	1	1	1	1	

TABLE H.—Fifteenth Anthracite District, 1903

Nationality of Persons Injured Inside and Outside the Mines

	American	English	Irish	German	Polish	Lithuanian	Justrian	Russian	Totals
January, February, March, April, May, June, July, August, September, October, November, December,	2	1 1 2	1	1 1 1 1	1 1 1 2	1	1	1	3 4 2 4 1 7 6 5 7 3 3 1
Totals,	24	5	2	4	6	1	2	2	46

TABLE I.-Fitteenth Anthracite District, 1903

Operators and mines, kind of openings, type and size of fans, size of furnaces, volume of air produced by fan or furnace per minute, number of splits of air currents, number of persons employed inside, and quantity of air produced for each employe per minute

1991 Sidus to radmun sammers.  101 babiyong shunin reg namen das	293	207	328	208	2018
beyoldm9 snosred to redmaN shismi	483	1 10 10	60 1-	309	45.7
Number of cubic feet per minute passing out at outl't	152, 789	101 860 50,929	146,750	136.316	192,306
Total quantity of air per finduce circulating in all the splits in cubic leet	141,596	94.388	122,846	122,350	178.375
Tig to 1991 oldus to redmuN 991 gairest and 1991 1901 is sain	147,842	98,56 <u>1</u>	133, 120	124 480	150,000
-up the to still to tedinor.	13	l. ∝ :	1 01	6	<b>⊘</b> .
Power used	Steam,	Steam,.	Steam.	Steam,.	Steam,.
nsl lo sinsk	Guibal,.	Vulcan	Whiting.	Guibal,	Guibal,
ni-beqoleveb egusg test/N	11/2	1.8	23%	1.4	1.7
Zumber of revolutions per	22	èà	120	7.5	09
Depth of blades in feet	5-1	t= t=	41/4	<u></u>	t-
Width of blades in feet	3	00 00	9	00	00
Dlameter of fan in feet	202	25.5	18	52	53
Method of ventilation	3 Fans	Fan,	4 Fans,	3 Fans,	3 Fans,
Caseous of non-gaseous	Gaseous,	Non-gas. Non-gas.	Gaseous,	Gaseous,	Gaseous,
gninego to baiN	Shaft & slope.	Slope, Drift & slope.	Slope,	Shaft & slope,	Slope & drift,
Names of Operators and Mines	Lehigh Valley Coal Co. Centralia colliery.	Midvalley Coal Co. Midvalley No. 2 colliery. Midvalley No. 1 colliery,†	P. and R. Coal and Iron Co. Potts colliery.	Summit Branch Mining Co. Williamstown colliery,	Lykens Valley Coal Co. Short Mountain colliery,

†Coal prepared at No. 2 breaker \*Pumping station

TABLE 1.—Fifteenth Authracite District, 1903
Operators, Location of Collieries, Railroads, Etc.

Railroad to Mine	Lehigh Valley Lehigh Valley	Wilburton, Lehigh Valley	Summit Branch and Lykens Valley	Lykens Valley	Philadelphia and Reading
P. O. Address	Centralia,	Wilburton,	Lykens,	Lykens,	Pottsville,
Name of Superin- tendent	J. M. Humphrey, Centralia, Lehigh Valley J. M. Humphrey, Centralia, Lehigh Valley	T. E. Snyder,	Wilkes-Barre, . Hood McKay, Lykens,	Hood McKay, Lykens, Lykens Valley	rg Coal Columbia W. J. Richards, Pottsville, John Veith, Pottsville,
P. O. Address	Wilkes-Barre, Wilkes-Barre,	Philadelphia, .	Wilkes-Barre, .	Wilkes-Barre, .	Pottsville,
Name of General Superintendent	Co. Columbia. S. D. Warriner, Wilkes-Barre, Columbia. S. D. Warriner, Wilkes-Barre,	Columbia., John S. Wentz, Philadelphia, Columbia, John S. Wentz, Philadelphia,	Dauphin, R. A. Quinn,	Dauphin, R. A. Quinn,	W. J. Richards,
County	Columbia,.	Columbia,.	Dauphin,	Dauphin,	Columbia,.
Names of Operators and Col- lieries	Leb xh Valley Coal Co. Centraina Locust Run,	Midvalley No. 1, Midvalley No. 2,	Summ t Branch Mining Co, Williamstown,	Lykens Valley Coal Co.	Philadelphia and Reading Coal Potts,

tTotals in this column are averages

TABLE 2.—Fifteenth Anthracite District, 1903

Number of tons of coal mined in each colliery, number of days worked, number of persons employed, number killed and injured, number of kegs of powder used, etc.

Number of horses and mules	88	94	111	135	88	70
Number of pounds of dynamite	132, 350	132,392	80, 900	80,900	90, 791	24,115
Number of kegs of powder used	3,982	3,982	5,771	5,771	12	3,873
Number of non-fatal accidents	19	19	4-1	20	2	00
Number of fatal accidents	en :	က	12	63		2
Number of employes	710	729	8255	825	682	933
Number of days worked	237	237	263	263	273	247
Total production of coal in tons	365,662	365,662	463,822	463,822	379,359	306,461
Number of tons sold to local trade and used by employes	7,222	7,222	1,904	1,904	4,733	4,079
Number of tons used for steam and heat at collieries	29, 920	29,920	17,000	17,000	44,435	126,729
Number of tons of coal shipped by rail or otherwise	328, 520	328,520	444,918	414,918	330,191	175,653
County	Columbia,		Columbia,		Columbia,	Dauphin,
Names of Operators and Collieries	Centralia colliery. Locust Run colliery.	Totals,	Midvalley No. 2 colliery, Midvalley No. 1 colliery,	Totals,	Philadelphia and Reading Coal and Iron Co. Potts colliery,	Summit Branch Mining Co.

\*Pumping station †Coal prepared at No. 2 breaker

# TABLE 2-Recapitulation

Lehigh Valley Coal Co., Col. Philadelphia and Reading Coal and Iron Co., Col. Summit Stanch Minng Co., Pakensh Minng Co., Pakensh Valey Coal and Iron Co., Pakensh Valey Coal Co., Coal Coal Co., Coal Coal Coal Coal Coal Coal Coal Coal	Columbia Columbia Columbia Pauphin		29, 920 11, 000 41, 435 126, 720 57, 378	7,222 1,004 4,733 13,441	305, 662 463, 822 371, 331 346, 461 347, 976	237 253 273 273 271 283	729 825 682 933 1,207	63 63 64 63	20 10 t≈ ∞ t≈	3,982 5,771 3,873 2,918	132, 392 80, 500 90, 791 24, 115 13, 590	133 83 133 134 144	
		1,556,438	275, 462	31,379	1,863,280	261	4,376			16,556	341,788	526	

\*Not including washeries

TABLE 2-Continued

	Number of air compressors				1		97		63
1	Number of electric dynamos							¢1	¢1
ber per	Quantity delivered to surface			3,830	3,830	4,500	4,878	2,120	15, 328
əşnı	Capacity in gallons per min				4,500	4,720	7.267	3,692	20,179
Sula	Number of pumps delive			4	7	4	10	4	66
	Total horse power			360	1,199	2,429	2,700	3,230	9,558
Ils 1	Number of steam engines o			0.10	=	13	24	21	72
ves	Electric	60	8					2	7.0
Locomotives	TİA								
Loca	Steam			6	6		2	1 2	19
	Total horse power	3(-0	2,800	2.400	3,470	1.820	8,205	8,440	19, 735
SA	Horse power	5,500	2,793	2,400	3,130	1,820	4,905	2,540	14,915
of Boilers	Tubular	16	16	1000	2	H	25	15	80
Number of	Horse power	FINE	3116	- F	320		3,300	106	4.820
Ž	Cylindrical	<u> </u>	2	91	16		9	60	127
	County	Columbia,		Columbia,		Columbia	Dauphin,	Dauphin,	
	Names of Oyerators and Collieries	Lohigh Valley Coal Co. Centralia colliery, Locust, Run coll.ery,	Totals,	Midvalley No. 2 colliery, Midvalley No. 1 colliery,	Totals,	Philadelphia and Reading Coal and Iron Co. Potts collery,	Summit Branch Mining Co.	Lykens Valley Coal Co. Short Mountain colliery,	Grand totals,

TABLE 2-Recapitulation

	,,	The second secon	
		Ziossanduno ais lo redinuz	L 61 69
		Cylindrical Tubular  Tubular	81 63
	901	() sanity delivered to surfaming per minute-Eallone	
	9;	County  Columbia  Der minute-Eatlons  County  Cylindrical  Tubular	8 652 17.7.1 17.95 17.95 17.95 17.95
	Su		A A C 4 (5)
-		Town between	
	Ils	Number of steam engines of	1,11,11,11
	ives	Sintrelic	60 61 70
	comot	. Tik	
	ß	meals	10 22 0
	-	T tol horse power	2, \$90 8, 476 1, 820 8, 205 3, 440 19, 735
	егв	Horse power.	2, 500 2, 500 1, 820 4, 905 14, 915
	of Boil	1sludul'	Se # 13 6
	Number of Boilers	Horse power	300 330 330 4.830 4.830
	4	Cylindrical	94 50 5
		County	Columbia, Columbia, Columbia, Dauphin, Pauphin,
			and Iron

TABLE 3.—Fifteenth Anthracite District, 1903 Number of Each Class of Employes at Each Colliery

ә	Grand totals, inside and outsid	729	682	825	933	1.207	4,376
side	Total outside	249	308	2255	52.4	350	1,666
Employed Outside	7]] ofher employes			95	377	194	921
ployed	Book-keepers and clerks	1	1 11	ro	4	24	20
Em]	Slate pickers (men)	Ħ	48	12			1.1
Persons	Slate pickers (boys)	۷. ا	1 0,11	02	44	19	320
Jo	Engineers and firemen	31	27	24	82	52	216
ons	Blacksmiths and carpenters			61	25	S	106
pati		1	- 1:	-	~		
Occupations				- ii	- ii	- li	7
		480	374	009	399	21.8	2,710
de	All other employes			42	191	353	807
d Insi	Сотралу теп		11	43			86
ploye	Lupmen	63	:		11	12	44
Persons Eniployed Inside	Door boys and helpers		le il	1.	2	-	52
Person	Drivers and runners		11 62 11		27	16	566
s of	Miners' laborers	18	7.6	157	26	97	437
Occupations of	raniM.	193	%	260	150	1.96	996
Occu	Fire bosses and assistants	:	# 9:	c: j	7:	10 (	61
	Assistant mine toremen	-	11 : .	- 1	4 (	i.	22
	nəmətol ən.M	4	67	2	67		12
	County	Columbia Columbia	Columbia,	Columbia Columbia	Dauphin,	Dauphin,	
	mes of Operators and Collieries			***	hn ·	Lykens Valley Coal Co. Short Mountain colliery,	Totals,

# TABLE 3-Recapitulation

	Cirand total inside and outside	682 825 825 1,207 4,376
	relation has abbut later farmi)	F. 4
side	Total outside	240 205 525 534 534 1,666
l Out	All other employes	121 121 121 171 171 921
ployed	Поок-кеерегя яла сlеткя	00 00 TC 4 TC 01
s Em	Slate pickers (men)	11 12 12 12 12 12 12 12 12 12 12 12 12 1
Occupations of Persons Employed Outside	Slate pickers (boys)	25 44 44 67 120 130 130 130 130 130 130 130 130 130 13
of I	Engineers and fremen	25 22 24 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
tions	Blacksmiths and carpenters	20 112 20 30 106
cupa	nemeral ebistuO	c3 c1   00
ő	Superintendents	
! 	ebiani latoT	480 374 600 359 857 2,710
side	VII other employes	135 116 42 161 553 807
Occupations of Persons Employed Inside	Company men	27. 43. 43. 63. 63. 63. 63. 63. 63. 63. 63. 63. 6
mploy	no aquin (1	ca +000 4
sons E	Deor-poys and helpers	00 cities to 150
f Pers	lutivers and runners	34 266 97 266
o suoi	Miners' laborers	. 81 157 157 266 97 437
cupat	arenila	193 266 150 266 266 266
ő	Fire bosses and assistants	6 62 4 6 1 8 1
}	Assistant mine foremen	1 : 1 : 1
	Aline foremen	4 01010101   61
	County	Columbia, Columbia, Columbia, Dauphin,
	Names of Operators and Collieries	Lehigh Valley Coal Co., Philadel his and Reading Coal and Iron Co., Summit Branch Mining Co., Lykens Valley Coal Co., Totals.
	Лате	Lehigh Philade Tron Midval Summi Lykens

TABLE 3-Continued

								: 11	
	Total	237	273	21.3	71.2	283	261		273 273 284 284 284 261
	December		18.1	18.8	21.9	25	21		18.1 18.2 25.3 21.9
	November	14.4	18	12.3	21.1	23	17.8		14.4 18 12.3 21.1 23 17.8
reaker	October	15.9	21.8	17.3	19.6	21.6	19.2		15.9 21.8 17.3 19.6 21.6
th in B	Tedmeiqe2	21.8	23.1	22.4	18.4	20.6	21.3		21.8 23.1 12.4 17.4 20.6 21.3
h Mont	1sugu A	24.3	24.9	24.4	22 7	24.3	24.1		22 22 22 24 24 24 24 24 24 24 24 24 24 2
ked Eac	July	22.9	26	24.8	22.9	25.2	24.4		22.9 24.7 25.2 24.4 4.4
ys Worl	June	22.3	25	25.7	22.4	25.9	24.3		22.3 25.1 25.9 25.9 24.3
Number of Days Worked Each Month in Breaker	May	20.2	46	22.7	21.3	24.3	29.5	-	20.2
Number	IliqA	22.2	19	93.9	222	25.9	22.6	ulation	22 2 23 9 22 9 25 9 25 9
	Матећ	23.9	25	23.8	19 8	25.2	23.5	3-Recapitulation	23.5 23.5 23.5 23.5 23.5 23.5
	February	23.4	23	22.9	18.4	20.7	21.7		23.4 22.9 18.4 20.7
	January		25	24.3	16.6	20.8	22.5	TABLE	24.3 24.3 16.6 20.8
	County	Columbia,]	Columbia,	Columbia,]	Dauphin,	Dauphin,			Columbia. Columbia. Columbia. Dauphin.
Names of Operators and Collieries		Centralia coll.cry. Locust Run collery.	Philadelphia and Reading Coal and Iron Co. Potts Collery.	Midvalley Coal Co. Midvalley No. 1 c. Hiery. Midvalley No. 2 colliery.	Summit Branch Mining Co. Williamstown colliery,	Lykens Valley Coal Co. Short Mountain colliery,	Averages,		Lehigh Valley Coal Co. Philadelphia and Reading Coal and Iron Co., Midvalley Coal Co. Summit Branch Mining Co., Lykens Valley Coal Co., Averages,

TABLE 4.—Fifteenth Anthracite District, 1903 Fatal Accidents in and about the Mines

Nature and Cause of Accident in Brief	Killed by a fall of slate from high side of	Fell knay.  Fell was riding in going bone from work.	M 4	descending cage Mine locomotive upon which he was firing was thrown from the track, eatching him in the wavede. Was scalled to death	by escaping steam. By falling down a control Attempting to uncontrol they were in mo	 	Ferry.  For a fall of slate at face of breast.  Ly a fall of east while crossing a breast in which he was working
County	Dauphin,	Columbia,.	Dauphin Columbia,.	Columbia,.	Dauphin,	Columbia,.	Dauphin,
Name of Colliery	Williamstown,	Midvalley No. 1,	Williamstown, Centralia,	Midvalley No. 1,	Short Mountain, Midvalley No. 2,	Centralia,	Short Mountain,
Number of orphans	c1		<b>#</b>		en	H 60	
swobiw to redminX			M		Z.v.	M.	
92A     Alarried or single	5 M.	S S	21.85 	<u> </u>	81 83 81 83	88	₩ ₩ ₩ ₩
nothedirea	Miners' laborer 35	Miner,	Miner,	Fireman, 21	Laborer, 3	Miner,Blacksmith,	Miners' laborer 17
VilinnoitsN	American,	Lithuanian,	Irish,	American,	American,	Austrian,	American,
Name of Person	Andrew Brown,	Peter Gibb ns,	John Finley	Isaac Lazalere,	Ben Row, Frank Ferenze,	John Pereney,	William Hawk,
	7	LC: pref	March 21 June 25	4	41-	16	8183

TABLE 5.—Fifteenth Anthracite District, 1903 Non-Fatal Accidents in and about the Mines

Nature and Cause of Accident in Brief	Back and ankle sprained by falling from a trestle, the hand-rail of which he	was fixing. Foot injured by piece of slate falling on it. Arm broken. While starting a battery a lump rolled down from above, striking	him on the arm.  Head crushed. A plank broke, upon which he was walking, throwing him to the ground, his head striking against	an iron pipe. Sight of an eye lost by being struck with a fragment of a window pane which was	broken by a piece of flying coal.  Foot bruised by fall of coal from high side of gangway, while in act of load-	Head and body bruised by fall of coal.  And broken; slipped and fell into the	Leg crushed in attempting to throw rope of whole it was in motion	Collar brone broke to while dumping an ash dumper, the box of which was pivoted too far, causing it to fall backward	upon him. Fell from a chute, the battery of which he was starting, into a mine car, bruis-	ing his body and legs. Rib fractured by being caught between chute and car upon which he was riding.
County	Columbia,	Columbia, Columbia,	Columbia,	Columbia,	Columbia,	Columbia, Columbia,	Columbia,	Columbia,	Columbia,	Columbia,
Name of Colliery	Centralia,	Midvalley No. 2,	Centralia,	Potts,	Centralia,	Centralia,	Centralia,	Centralia,	Potts,	Midvalley No. 2, Columbia,
Married or single	vi	, Kin	Ħ.	υi	M.	wiwi	M	αi	vi	vi
92A	23	45.23	40	16	38	20	255	20	22	21
noitaquooO	Chute boss,	Miner,	Carpenter,	Slate picker,	Miner's laborer,	Miner, Jig tender,	Repairman,	Laborer,	Starter,	Austrian, Driver,
Nationality	Irish,	Russian,	American,	American,	Polish,	English,	American,	American,	German,	
Name of Person	Patrick Gaugher,	George Waseoski, Edward Baglin,	William Winkle,	Fred, Leverence,	John Dorish,	George Wiles,	Albert Smith,	Edward Hewig,	John Beck,	Charles Balashie,
Date of accident	Jan. 1	233	Feb. 13	16	16	March 26	31	13	April 16	30

Fingers mashed. Caught between pulling buy and coupling while trying to un-	couple a trip of cars, in motion. Fell into muchinery while at work on a	Coal-jig and had his Wrist broken.  Body and head bruised by premature dis-	culturing of a shot, totton face and bead by premature blast. Face and bands burned by an explosion of gas, ensued by one of the victims who worked in adjoining breast going up with naked light while the fire boss	Leg by ken, being cought with a rush	of coal from high sate of galaway. Head coal, While in the act of drilling a hole, piece of slate fell on him from	the top. Brussed about the hips, being caught be- tween mune cars while trying to un-	couple them. Back housed and internally injured by a control of close	owder. Theges in heater	hey had prepared. d by a fall of coal. racture of leg by falli	mune cars. Compound fracture of leg by a fall of	slate. Leg bruised by being caught between mine	ears and a motor. Head, leg and ribs injured by a fall of	Arm torn off above elbow. While climb-	lng a post no red into manner is scaled with live steam by the breaking of a flange of a steam lin, which they	were end average to straighten. Leg backen by a fall of ceal. Eye injured. He was working with a plok, which glanged off the coal, striking him.	in the eye.  Body injured by falling under mine cars. Internally injured by falling down a shaft while attemnting to impo off packet	ng under mine p on a rapidly 1
Columbia,	Columbia,	Columbia,	Columbia, Dauphin, Da	Columbia,	Columbia,		Columbia,	Pauphin,	Columbia, Dauphin,	Dauphin,	Columbia,	Columbia,	Columbia,	Columbia, Columbia,	Columbia, Columbia,	Dauphin,	Columbia,
Midvalley No. 2,	Potts,	Centralia,	Centralia, Short Mountain, Short Mountain, Short Mountain, Short Mountain,	Centralia,	Centralia,		Midvalley No. 1,	Williamstown,	Centralia, Short Mountain,	Short Mountain,	Centralia,	Centralia,	Potts,	Centralia,	Centralia,	Williamstown,	Midvalley No. 2,
υż	vi.	M.	MARKA	υż	ωi	υń	vi	MM	N. N.	υź	M.	M.	υż	vi vi	MM	S. K	υi
16	16	60	38 44 38 88	42	20	20	30	355	182	20	67	43	16	30	45	28	13
Driver,	Slate picker,	Miner,	Miner's laborer, Fire boss, Miner, Miner,	Miner's laborer,	Miner's laborer,	Laborer,	Miner's laborer,	Miner,	Miner,	Laborer,	Track layer,	Miner,	Slate picker,	Laborer,	Miner,	Plane runner,	Laborer,
Polish,	Polish,	Irish,	American, English, American, American,	Lithuanian,.	Polish,	American,	Russian,	English,	English,	American,	American,	Austrian,	American,	American,	Polish,	American,	Polish,
Joseph Douse,	Edward Blochman,	Edward J. Lavelle,	James Jennings, John E. Buckley, W. Jam Maheney, Villiam Callahan, John McAuliff,	Charles Pushko,	George Jurgie,	Herbert Greager,	Joseph Stancorski,	John Crozier,	George James,	Anton Platzen,	Lawrence Minich,	Michael Yacoblek,	Samuel Hughes,	Anthony Wetzel,	Michael Korask, Jacob Blotch,	John Gotschall,	Stanley Duda,
30	22	9	000000	20	99	13	16	16 16	28.9	4	10	20	31	~ 기	C, 61	16	30
pril	ay	пе			ıly				àc 3d					pt.			

TABLE 5-Continued

Nature and Cause of Accident in Brief	压	plane. Compound fracture of arm and finger cut off by being wound around a shaffing.	while playing with it. Legs and body bruised by a fall of slate.	These men received bodily injuries simultaneously by being caught between the rib and a trip of mine cars, along side of which they were running to uncouple	Skull fractured. Struck by a piece of coal which rolled down the slope on	which he was making a survey.  Bone of right arm splintered by a fall of coal.
County	Dauphin,	Dauphin,	Dauphin,	Dauphin, Dauphin,	Columbia,	Columbia,
Name of Colliery	Williamstown, Dauphin,	Williamstown,	Short Mountain, Dauphin,	Williamstown,	Centralia, Columbia,	Potts,
Married or single	M.	vi	M.	ഗ് ഗ്	ωi	M.
93A	42	15	33	27 26	22	45
noisequesoO	American, Blacksmith, 42	American, Slate picker, 15	Miner,	Laborer,	Assistant transit man.	Miner,
Vationality	American,		American,	American,	American,	German,
Name of Person	Albany Chester,	Harper Kinsey,	John W. Hawk,	James Brennan,	Lewis Winters,	Mattes Minrod,
Date of accident	Oct. 1	9	23	Nov. 7	25	Dec. 21

### FATAL ACCIDENTS

# By Falls of Coal, Slate and Roof

Andrew Brown, a laborer in a gangway at Williamstown colliery was fatally injured on January 14, by a fall of slate. Having taken out the cut, Brown, who was cleaning up the track to enable the car to be brought close to the face, was caught by a piece of slate which slid out from the high side of the gangway, crushing the life out of him.

William Hawk, a laborer in a breast at Short Mountain colliery, was instantly killed October 23 by a fall of slate, and his brother for whom he labored, was seriously injured. An investigation disclosed the fact, that the breast was not properly timbered and that although warned of the danger by those who understood the nature of the roof, owing to their stupidity or dullness of perception, they persisted in working under it until it fell on them with the above mentioned result.

Alvin Hoke, a young man, working in a breast with his father at Short Mountain Colliery was fatally injured November 25 by a fall of coal. At the time of the accident, they were on each side of the breast and the boy remarked that "he thought he heard something working." "You had better come over to this side," the father replied, and the young fellow, watching what he considered a favorable opportunity, attempted to cross over, but only succeeded in getting to the centre of the breast when a large slip of coal, the full thickness of the vein, slid out upon him hurling him some distance down the breast and injuring him so severely that he died a few hours after being taken to his home.

# By Falling Down Shafts, Etc.

John Finley, a miner in Bear Valley shaft of the Williamstown colliery, was fatally injured on March 21 by falling down a breast manway. After igniting a shot, in which it was alleged there were 26 inches of powder, he and his partner repaired to a heading some 10 yards distant from the face to await the result of the blast. In the heading at the same time were the two men from an adjoining breast who had sought this place of retreat for a similar reason. The amount of powder discharged in both places almost simultaneously, the smoke from which had to pass through that opening, and their close proximity to the point of explosion, made it very uncomfortable for the men in the heading; so much so that one of the number was momentarily overcome and fell over in the heading. On seeing this, Finley who was of an irritable temperament, and generally did things by impulses, jumped out into the manway which

at this point pitches 65 degrees and losing his foot hold, was precipitated to the bottom a distance of 150 feet and almost instantly killed. We do no injustice to his memory by expressing the opinion that although he was above the average as workman, had he been less impetuous his life would have been saved, as the men who remained in the heading experienced the bad effects of the smoke for a short time only and were able to go to Finley's rescue five minutes after he had fallen.

Ben Row, a laborer, came to his death on August 4, by walking into a counter chute in the White vein at the Short Mountain Colliery, operated by the Lykens Valley Coal Company.

On the day of the accident, Row and another man were walking along the gangway in the direction of the counter chute, the latter some yards in advance, but within talking distance. On arriving at the opening, around which is a traveling way protected by a balustrade, Row's partner passed over to the other side, keeping up the conversation meanwhile. Noticing that Row had ceased talking and turning around to ascertain the cause, he was horrified to find that he was nowhere to be seen. Hastily summoning aid they descended the counter chute by means of a rope and found Row lying apparently dead, having fallen about 60 yards. Though he lived some hours after the accident he never regained consciousness.

# By Explosions

John Pereney, shift leader, and Henry Wenk, blacksmith, were instantly killed by an explosion of dynamite on Sunday night August 16, about 9.30 P. M., at the Centralia Colliery, operated by the Lehigh Valley Coal Company. The accident occurred in what is known as the "Drainage Tunnel," used as a haulage road for that part of the colliery and through which all the water of the mine passes to Big Mine Run.

Pereney was engaged with three others in driving a cross-cut and Wenk was employed to sharpen the steel. Leaving his three partners at work at the face of the cross-cut, Pereney repaired to the box in which the explosives were kept to prepare a charge, and according to his partners' statements, had only been gone a few moments when there was a terrific explosion by which Pereney was literally blown to fragments and the blacksmith, who must have been close to the scene of the explosion, was instantly killed. It is evident that the accident was due to the carelessness of Pereney in handling the explosives; but in what manner the dynamite was ignited or the amount exploded will never be known, as there was no one in the vicinity of the explosion but the two victims.

# By Mine Cars

Peter Gibbons, a miner at Midvalley No. 2 Colliery, was fatally injured on February 12, by falling under a rapidly moving trip of empty mine cars. On completing his day's work and after being hoisted to the surface, he with several others, got on the trip drawn by a mine locomotive on its way to Midvalley No. 1 and about two and one-half miles distant. Arriving at the latter place, one of the men, on looking around discovered Gibbons lying on the track, and on investigation it was found that part of the trip had passed over him, injuring him so seriously, that he died while being borne to his home.

On August 7, Frank Ferenze, an outside laborer employed at the bottom of a plane at Midvalley No. 2 Colliery, in attempting to uncouple a trip of mine cars while in motion was caught between them and squeezed so badly that he died the following day at the State Hospital, whither he had been taken after the accident.

### Miscellaneous

Isaac Lazalere, a fireman on a locomotive engaged in hauling coal from No. 1 to No. 2 Midvalley collieries, was scalded to death in a wreck which occurred August 4. At the time of the accident, there were two locomotives attached to the trip, one pulling, the other pushing, and Lazalere was in the cab of the first engine. While running at a high rate of speed, a cow, which had been running along side the track for a considerable distance, suddenly leaped in front of the first engine, throwing it off the track, unknown to the engineer at the rear end of the trip, whose engine continued to push until the front locomotive was thrown over the bank and the front wagon entering the cab, broke the steam connections. Lazalere, who was pinned fast in the wreck was so badly scalded before being liberated, that he died in great agony the following day.

William P. Doyle, repairman at the Continental Shaft of the Centralia Colliery, was instantly killed on June 23. Doyle, whose duties were of a variable character, was on the day of the accident, filling the place of one of the bottom men who had not reported for work that morning. In attempting to cross over from one side of the shaft to the other, instead of going around the shaft as he should have done, he was caught by the descending cage and crushed to death.

### Condition of Collieries

At Centralia Colliery the Continental shaft has been sunk from the first to the second lift, and a tunnel driven from the Mammoth Leader on the first lift of the Holmes Plane to the Skidmore vein. A new electric haulage plant has been installed, consisting of two 10 ton motors and one 6 ton motor, to accommodate which six miles of gangway have been equipped with electric appliances of the most modern type.

The general condition of the colliery as to drainage and ventilation is good, with the exception of the Logan Slope, in which there are parts, being robbed out preparatory to being abandoned, in which the ventilation is inadequate.

For some reason unknown to the writer, this colliery suspended indefinitely about the middle of November.

# Midvalley No. 1 Colliery

This colliery consists of two water level drifts and two slopes in which are opened the Holmes, Mammoth and Buck Mountain veins.

In the slope working the gangways have nearly all reached the boundary and are being robbed backward.

A twenty-five foot fan furnishes a good supply of fresh air; but the drainage at the time of my last visit was not up to the standard. This is through no fault of the management, however, but is due to the fact that the colliery had been drowned out for months and there was not sufficient time after the water was taken out to get the ditches in proper condition.

There were no improvements made during the year other than making a new pump house in which a 12 inch duplex pump is to be placed.

# Williamstown Colliery

This colliery comprises No. 3 slope and Biglick slope on the Williamstown side; Bear Valley slope and Bear Valley shaft on the Bear Valley side, the two latter being reached by a 3,600 foot tunnel through the Locust mountain.

Little or no coal worthy of mention was mined during the year on the Williamstown side owing to the fire at Biglick slope, which has been burning for over a year, but which from present indications is now under control, and the flooding of No. 3 slope, covering about the same period of time. The colliery had, therefore, to depend entirely upon Bear Valley for its supply, which had hitherto been considered but an auxiliary.

The ventilation and drainage are fairly good.

The improvements consisted of the sinking of No. 2 shaft and the erection of a boiler house and two pairs of 36x60 direct-acting engines.

The development of this shaft by tunnelling north and south will

be continued during 1904, the intention being to push this work as rapidly as possible.

# Short Mountain Colliery

The general condition of this colliery is good. In some parts, however, while the ventilation is not bad, it is not exactly what it should be.

This applies to places that were abandoned years ago; supposed to have been worked out, according to the methods then prevailing, and from which 25 per centum more coal could have been won had ordinary care been taken, and which are now being re-opened for the purpose of getting the coal which at that time was not deserving of notice. To conduct the air through these broken strata, in order to remove the coal from the upper portion of the pillars (the lower portion being invariably removed, regardless of what remained above) the present management finds to be no easy task.

Practically no improvements were made during the year, except that two new pumps were put in place to deliver water to the surface and others are to follow shortly.

# Potts Colliery

At this collicry three seams are being worked: the Diamond, Primrose and Mammoth. And while it is the most gaseous colliery under my charge, it is, at the same time, one of the best, if not the best ventilated in the district. Two 18 foot fans on the Mammoth, a 12 foot fan on the Primrose and a 15 foot fan on the Diamond are found necessary to ventilate and keep in a safe condition these extensive workings.

With the exception of an under-ground slope and a tunnel to the north dip of the Mammoth, both of which are now well under way, no improvements worthy of note have been made during the year just closed.

### Mine Foremen's Examinations

The annual examination for the positions of mine foreman and assistant mine foreman was held in the court house at Pottsville, April 28th and 29th, at which six inspection district boards were represented and conducted the examination jointly.

Five applicants from the 15th district appeared before the board two of whom (Boyd Minnich and James Flynn), were given certificates as assistant mine foremen.

Previous to this year the law in regard to the qualification of fire

bosses was viewed from a different standpoint by the inspectors of the northern and southern coal fields.

In the former no person could hold the position of fire boss unless he had passed a successful examination and was in possession of an assistant mine foreman's certificate; while in the latter it was only necessary to furnish the inspector of the district with satisfactory proof of one's having worked a certain time in a gaseous mine as a miner.

The men in the southern field were evidently wrong, but why or upon whose authority the method, which became a general law in this region, was established, does not appear.

Their attention was called to this violation of the law by the Chief of the Department of Mines at a meeting of all the mine inspectors of the Anthracite region held at Hazleton, at which Mr. Roderick presided, and where it was decided that no person could legally hold the position unless he held an assistant mine foreman's certificate.

At that time there were in this region holding the position of fire boss, quite a number who, although being good practical men, were incapable of standing a rigid examination, because they had held their positions under an entirely different tenure which required no theoretical knowledge of mining.

Apart from its being an ex-post-facto law, as applied to this particular case, it would be a hardship to compel these parties to undergo a rigid examination at such short notice, and for this reason the rule requiring applicants "to answer correctly a certain percentage of the questions, before being entitled to a certificate," was not strictly adhered to, in the case of those who had held the position of fire boss prior to the Hazleton meeting, in the examination which followed.

As a result of that meeting, the inspectors of this region were instructed by the Chief to hold another examination.

In obedience to these instructions the examining board for the Fifteenth District held an examination at Ashland on August 14, and at Williamstown August 19, at which forty-eight applicants passed successfully and were recommended for certificates as follows:

### Assistant Mine Foremen

John Evans, Ashland; Martin Lynch, Ashland; James Kealy, Centralia; Nicholas Ditchey, Locust Dale; William Reilly, Williamstown; Charles H. Harman, Wiconisco; Patrick Fahey, Lykens; William Crook, Williamstown; F. J. Knapp, Ashland; William Singleton, Wilburton; Joseph Goddard, Ashland; Alpheus Barr, Wilburton;

Phelix Wolfgang, Ashland; John Carr, Ashland; John Fineral, Ashland; Henry Cleaver, Ashland; William F. Turnow, Ashland; George E. Raker, Wilburton; Robert H. James, Lykens; John Smiles, Wiconisco; Williams M. Hunter, Lykens; William G. Zerbe, Lykens; S. J. Beaver, Aristes; Arnold Trefsger, Mount Carmel; Thomas James, Ashland; Patrick Golden, Williamstown; John Lynch, Ashland; August Blank, Locust Dale; Thomas E. Davis, Ashland, George H. Hunter, Lykens; Harry L. Shamper, Lykens; Francis M. Schindler, Wiconisco; Isaac J. Cole, Wiconisco; Benjamin F. Jones, Centralia; Edwin S. Jasper, Wilburton; Theodore D. Berry, Wilburton; Meyrick Jones, Centralia; Emil Ermert, Ashland; John Herbert, Ashland; Patrick Kelly, Locust Dale; Henry Geating, Ashland; Michael Hanerahan, Wilburton; Charles H. Zimmerman, Wiconisco; Edward A. Schlein, Williamstown; Robert Graham, Williamstown; Isaac P. Bretz, Wiconisco; James McDonald, Ashland; Peter Haley, Ashland.



# ANTHRACITE MINING LAWS

OF

# PENNSYLVANIA

### AN ACT

To provide for the health and safety of persons employed in and about the anthracite coal mines of Pennsylvania and for the protection and preservation of property connected therewith.

### ARTICLE I

Section 1. Be it enacted, &c., That this act shall Application of act. apply to every anthracite coal mine or colliery in the Commonwealth, provided the said mine or colliery employs more than ten (10) persons.

### ARTICLE II

# Inspectors and Inspection Districts

Section 1. The counties of Susquehanna, Wayne, counties and their division into eight Luzerne, Lackawanna, Carbon, Schuylkill, Northum-districts. berland, Columbia, Lebanon and Dauphin, or so much of them as may be included under the provisions of this act, shall be divided into eight (8) inspection districts as follows:

Section 2. First. All that portion of the Lacka- First district. wanna coal field lying northeast of East and West Market streets in the city of Scranton, and of Slocum and Drinker streets in the borough of Dunmore, including the coal fields of Susquehanna and Wayne counties.

Second, That portion of the Lackawanna coal field Second district. in Lackawanna county lying southwest of East and West Market streets in the city of Scranton, and west of Slocum and Drinker streets in the borough of Dunmore.

Third. That portion of the Wyoming coal field situ- Third district.

ated in Luzerne county, east of and including Plains and Kingston townships.

Fourth district.

Fourth. The remaining portion of the Wyoming coal field west of Plains and Kingston townships, including the city of Wilkes-Barre and the boroughs of Kingston and Edwardsville.

Fifth district.

Fifth. That part of Luzerne county lying south of the Wyoming coal field together with Carbon county.

Sixth district.

Sixth. That part of the Schuylkill coal field in Schuylkill county lying north of the Broad Mountain and east of a meridian line through the centre of the borough of Girardville.

Seventh district.

Seventh. That part of the Schuylkill coal field in Schuylkill county lying north of the Broad Mountain and west of a meridian line through the centre of the borough of Girardville, together with Columbia, Northumberland and Dauphin counties.

Eighth district.

Eighth. All that part of the Schuylkill coal field in Schuylkill county lying south of the Mahanoy Valley, and the county of Lebanon.

How vacancies shall be filled.

Section 3. In order to fill any vacancy that may occur in the office of Inspector of Mines by reason of expiration of term, resignation, removal for cause or from any other reason whatever, the judges of the court of Lackawanna county shall appoint an examining board for the counties of Susquehanna, Wayne and Lackawanna, and the judges of the court of Luzerne county shall appoint an examining board for the counties of Sullivan, Carbon and Luzerne, and the judges of Schuylkill county shall appoint an examining board for the counties of Schuylkill, Northumberland, Lebanon, Columbia and Dauphin.

Board of examiners, and when appointed.

Section 4. The said Board of Examiners shall be composed of three reputable coal miners in actual practice and two reputable mining engineers, all of whom shall be appointed at the first term of court in each year, to hold their places during the year. Any vacancies that may occur in the Board of Examiners shall be filled by the court as they occur. The said Board of Examiners shall be permitted to engage the services of a clerk, and they, together with the clerk, shall each receive the sum of five dollars per day for every day they are actually engaged in the discharge of their duties under this appointment, and mileage at the rate of six cents per mile from their home to

Vacancies to be filled by the court.

May engage clerk.

Compensation and mileage allowed.

the place of meeting and return by the nearest practicable railway route.

Section 5. Whenever candidates for the office of in- Notice of examinspector are to be examined, the said examiners shall ation of inspectors to be published. give public notice of the fact in not more than five papers published in the inspection district and at least two weeks before the meeting, specifying the time and place where such meeting shall be held. The said examiners shall be sworn to a faithful discharge of their duties, and four of them shall agree in their recommendation of all candidates to the Governor who have answered ninety per centum of the questions; the names of the applicants, the questions asked and answers thereto shall be sent to the Secretary of the Commonwealth, and published in at least two local papers, daily or weekly, and shall recommend only such applicants as they find qualified for the office.

Examiners to be

Recommendations, etc., to be sent to the Secretary of the Common-wealth.

Should the Board of Examiners not be able to agree in their selection and recommendation of a candidate, the judges of the court of common pleas shall dissolve the said board and appoint a new board of like qualifications and powers.

If Board of Examiners fail to agree, court may dissolve Board.

Upon the recommendation of the Board of Examiners as aforesaid, the Governor shall appoint such person or persons to fill the office of inspector of mines under this act, and shall issue to him a commission for the term of five years, subject, however, to removal for neglect of duty or malfeasance in office as hereinafter provided for.

point inspectors on ecommendation of

Removal,

Section 6. The person so appointed must be a citizen of Pennsylvania and shall have attained the age of thirty years. He must have a knowledge of the different systems of working coal mines, and he must produce satisfactory evidence to the Board of Examiners of having had at least five (5) years' practical experience in anthracite coal mines of Pennsylvania. He must have had experience in coal mines where noxious and explosive gases are evolved.

Inspectors must be citizens of sylvania a and thirty years old.

Experience required.

Before entering upon the duties of his office he shall take an oath or affirmation before an officer properly qualified to administer the same, that he will perform his duties with fidelity and impartiality; which oath or affirmation shall be filed in the office of the prothonotary of the county. He shall also proMust be sworn or affirmed.

Filing of oath.

Shall have modern instruments.

Salary.

How payable.

When and how deputy may be appointed.

Must reside in district for which appointed.

Shall examine col-

Shall attend every inquest.

Shall make an annual report to Secretary of Internal Affairs.

Contents of report.

Board may readjust districts.

vide himself with the most modern instruments and appliances for carrying out the intentions of this act.

Section 7. The salary of each of the said inspectors shall be three thousand dollars per annum, which salary, together with the expense incurred in carrying into effect the provisions of this act, shall be paid by the State Treasurer out of the Treasury of the Commonwealth upon the warrant of the Auditor General.

Section 8. In case the inspector becomes incapacitated to perform the duties of his office, for a longer period than two weeks, it shall be the duty of the judges of the court of common pleas to deputize some competent person recommended by the Board of Examiners to fill the office of inspector until the said in spector shall be able to fulfill the duties of his office and the person so appointed shall be paid in the same manner as is provided for the Inspector of Mines.

Section 9. Each of the said inspectors shall reside in the district for which he is appointed, and shall give his whole time and attention to the duties of the office. He shall examine all the collieries in his district as often as his duties will permit or as often as the exigencies of the case or the condition of the mines require it; see that every necessary precaution is taken to secure the safety of the workmen and that the provisions of this act are observed and obeyed; attend every inquest held by the coroner, or his deputy, upon the bodies of persons killed in or about the collieries in his district; visit the scene of the accident for the purpose of making an examination into the particulars of the same whenever loss of life or serious personal injury occurs as elsewhere herein provided for, and make an annual report of his proceedings to the Secretary of Internal Affairs of the Commonwealth at the close of every year, enumerating all the accidents in and about the collieries of his district, marking in tabular form those accidents causing death or serious personal injury, the condition of the workings of the said mines with regard to the safety of the workmen therein and the ventilation thereof, and the result of his labors generally shall be fully set forth.

Section 10. The Board of Examiners, each for its respective district as hereinbefore provided for, in order to divide more equitably among the several

mine inspectors the labor to be performed and the territory to be covered by them in the performance of the duties of the office, may, at any time when they shall deem it desirable or necessary, readjust the several districts by the creation of new boundary lines, thereby adding to or taking from, as the case may be, the districts as at present bounded and described, if the court having jurisdiction approve the same.

Court must ap-

And in case it shall be deemed desirable or necessary to readjust any contiguous district, comprised of more than one judicial district, by the creation of new boundary lines, then in such case the examining boards, of the territory affected or requiring such adjustment, shall, in joint session, make such change or readjustment as they shall jointly agree upon, if the nearest court having jurisdiction in the territory affected to whom the said joint examining boards shall submit the matter, shall approve the same.

District comprising more than one judicial district.

Section 11. The mine inspector shall have the right, and it is hereby made his duty, to enter, inspect and examine any mine or colliery in his district and the workings and machinery belonging thereto, at all reasonable times, either by day or night, but not so as to impede or obstruct the working of the colliery, and shall have power to take one or more of his fellow inspectors into or around any mine or colliery in the district for which he is appointed, for the purpose of consultation or examination.

Duty of mine inspector.

Shall not impede the working of the colliery,

He shall also have the right and it is hereby made his duty, to make inquiry into the condition of such mine or colliery workings, machinery, ventilation, drainage, method of lighting or using lights, and into all matters and things connected with or relating to, as well as to make suggestions providing for the health and safety of persons employed in or about the same, and especially to make inquiry whether the provisions of this act have been complied with.

Shall inquire into condition of mine or colliery.

The owner, operator or superintendent of such mine or colliery is hereby required to furnish the means necessary for such entry, inspection, examination, inquiry and exit.

Owner required to furnish means necessary for entry of inspectors, etc.

The inspector shall make a record of the visit, noting the time and material circumstances of the inspection.

Must record visit.

Inspector shall not be pecuniarily in terested in colliery.

Section 12. No person who shall act or practice as a land agent or as the manager or agent of any coal mine or colliery, who is pecuniarily interested in operating any coal mine or colliery in his district, shall at the same time, hold the office of inspector of mines under this act.

How charges of incompetency, etc., of inspector shall be presented.

Section 13. Whenever a petition signed by fifteen or more reputable coal operators or miners or both, setting forth that any inspector of mines neglects his duties, or is incompetent, or is guilty of malfeasance in office, it shall be the duty of the court of common pleas of the proper county to issue a citation in the name of the Commonwealth to the said inspector to appear at not less than five days' notice, on a day fixed, before said court and the court shall then proceed to inquire into and investigate the allegations of the petitioners. If the court find that said inspector is neglectful of his duties or that he is incompetent to perform the duties of the office, for any cause that existed previous to his appointment or that has arisen since his appointment, or that he is guilty of malfeasance in office, the court shall certify the same to the Governor of the Commonwealth, who shall declare the office of inspector for the district vacant and proceed, in compliance with the provisions of this act, to appoint a properly qualified person to fill the office.

Investigation of charges.

How inspector may be removed.

How vacancy shall be filled.

Costs of investigation.

Inspector shall keep maps, etc., in a convenient place.

Inspectors now acting shall con-tinue until term expires.

petitioners. Section 14. The maps and plans of the mines and the records thereof, together with all the papers relating thereto, shall be kept by the inspector, properly arranged and preserved, in a convenient place in the district for which each inspector has been appointed, and shall be transferred by him with any other property of the Commonwealth that may be in his possession to his successor in office.

The cost of said investigation shall be borne by the

removed inspector; but if the allegations in the petition are not sustained the costs shall be paid by the

Section 15. The persons who, at the time this act goes into effect, are acting as inspectors of mines under the acts hereby repealed shall continue to act in the same manner as if they had been appointed under this act, and until the term for which they were appointed has expired.

### ARTICLE III

# Maps and Plans

Section 1. The owner, operator or superintendent Owner shall have of every coal mine or colliery shall make, or cause to made of mines. be made, an accurate map or plan of the workings or excavations of such coal mine or colliery, on a scale of one hundred feet to the inch, which map or plan shall exhibit the workings or excavations in each and what shall be every seam of coal and the tunnels and passages connecting with such workings or excavations. It shall state in degrees the general inclination of the strata with any material deflection therein in said workings or excavations, and shall also state the tidal elevations of the bottom of each and every shaft, slope, tunnel and gangway, and of any other point in the mine or on the surface where such elevation shall be deemed necessary by the inspector. The map or plan shall show the number of the last survey station and date of each survey on the gangways or the most advanced workings. It shall also accurately show the boundary lines of the lands of the said coal mine or colliery and the proximity of the workings thereto, and in case any mine contains any water dammed up in any part thereof, it shall be the duty of the owner, operator or superintendent to cause the true location of the said dam to be accurately marked on said map or plan, together with the tidal elevation, inclination of strata and area of said workings containing water, and whenever any workings or excavations are approaching the workings where such dam or water is contained or situated, the owner, operator or superintendent shall notify the inspector of the same without delay.

A true copy of which map or plan the said owner, operator or superintendent shall deposit with the inspector of mines for the district in which the said coal mine or colliery is situated, showing the workings of each seam, if so desired by the inspector, on a separate sheet of tracing muslin. One copy of the said map or plan shall be kept at the colliery.

Section 2. The said owner, operator or superintendent shall, as often as once in every six months, place, or caused to be placed, on the said inspector's map or

shown on maps,

map to inspector and keep one at

Shall record changes on maps every six months. Extensions shall be placed on inspector's maps within two months from date of last survey.

plan of said coal mine or colliery, the plan of the extensions made in such coal mine or colliery during the preceding six months. The said extensions shall be placed on the inspector's map and the map returned to the inspector within two months from the date of the last survey.

Maps of workedout or abandoned colliery must include all excavations, etc. Section 3. When any coal mine or colliery is worked out preparatory to being abandoned, or when any lift thereof is about to be abandoned, the owner, operator or superintendent of such coal mine or colliery shall have the maps or plans thereof extended to include all excavations, as far as practicable, and such portions thereof as have been worked to the boundary lines of adjoining properties; or any part or parts of the workings of which it is intended to be allowed to fill with water, must be surveyed in duplicate and such surveys must practically agree, and certified copies be filed with the inspector of the district in which the mines are situated.

Maps shall be extended and certified to inspector.

Neglect or refusal of owner to make map.

Section 4. Whenever the owner, operator or superintendent of any coal mine or colliery shall neglect or refuse, or from any cause not satisfactory to the inspector, shall fail, for a period of three months, to furnish to the inspector the map or plan of said colliery or of the extensions thereto, as provided for in this act, the inspector is hereby authorized to cause an accurate map or plan of such coal mine or colliery to be made at the expense of the owner thereof, which cost shall be recoverable from said owner as other debts are by law recoverable.

Inspector shall make map and recover costs from owner.

How an inaccurate map may be corrected.

Owner liable for costs.

When Commonwealth is liable for costs. Section 5. If the inspector finds or has reason to believe, that any map or plan of any coal mine or colliery, furnished under the provisions of this act, is materially inaccurate, it shall be his duty to make application to the court of common pleas of the county in which such colliery is situated for an order to have an accurate map or plan of said colliery prepared, and if such survey shall prove that the map furnished was materially inaccurate or imperfect, such owner, operator or superintendent shall be liable for the expense incurred in making the same.

Section 6. If it shall be found that the map or plan furnished by the owner, operator or superintendent was not materially inaccurate or imperfect, the Commonwealth shall be held liable for the expense incurred in making such test survey.

Section 7. If it shall be shown that the said owner, operator or superintendent has knowingly or designedly caused or allowed such map or plan, when furnished, to be incorrect or false, such owner, operator or superintendent thus offending, shall be guilty of a misdemeaner and upon conviction thereof, shall be punished by a fine not exceeding five hundred dollars or imprisonment not exceeding three months, at the discretion of the court.

Penalty for knowingly furnishing incorrect map.

Section 8. The maps or plans of the several coal mines or collieries in each district and which are placed in the custody of the inspector, shall be the property of the Commonwealth, and shall remain in the care of the inspector of the district in which the said collieries are situated to be transferred by him to his successor in office; and in no case shall a copy of the same be made without the consent of the owner, operator or superintendent.

Maps shall be property of Commonwealth and shall be in custody of inspector.

Section 9. The inspector's map or plan of any particular colliery shall be open for inspection, in the presence of the inspector, to any miner or miners of that colliery, whenever said miner or miners shall have cause to fear that his or their working place or places are becoming dangerous, by reason of the proximity to other workings which may be supposed to contain water or dangerous gases. Said map shall also be open to the inspection and examination of any citizen interested during business hours.

Inspector's map shall be open for inspection.

Section 10. It shall be obligatory on the owners of adjoining coal properties to leave, or cause to be left, a pillar of coal in each seam or vein of coal worked by them, along the line of adjoining property, of such width, that taken in connection with the pillar to be left by the adjoining property owner, will be a sufficient barrier for the safety of the employes of either mine in case the other should be abandoned and allowed to fill with water; such width of pillar to be determined by the engineers of the adjoining property owners together with the inspector of the district in which the mine is situated, and the surveys of the face of the workings along such pillar shall be made in duplicate and must practically agree. A copy of such duplicate surveys, certified to, must be filed with

Owner shall leave pillar of coal in each seam along the line of adjoining property.

How width of pillar shall be dedetermined.

Copy of surveys certified to must be filed with owners and inspectors. the owners of the adjoining properties and with the inspector of the district in which the mine or property is situated.

### ARTICLE IV

Shafts, Slopes, Openings and Outlets

Employes must be in connection with every seam, etc.

Must be two openings from every lift.

Safe means of ingress and egress.

Shall not apply to opening a new mine, etc., if not more than twenty persons are employed.

Cages shall be available.

How owner shall proceed where there is only one outlet

Petition and contents.

Section 1. It shall not be lawful for the owner, operator or superintendent of any mine to employ any person or persons in such mine or permit any person or persons to be in such mine for the purpose of working therein, unless they are in connection with every seam or stratum of coal; and from every lift thereof, worked in such mine, not less than two openings or outlets, separated by a stratum of not less than sixty (60) feet in breadth underground, and one hundred and fifty (150) feet in breadth at the surface, at which openings or outlets safe and distinct means of ingress and egress are at all times available for the person or persons employed in the said mine, but it shall not be necessary for the said two openings to belong to the same mine if the persons employed therein have safe, ready and available means of ingress and egress by not less than two openings. This section shall not apply to opening a new mine or to opening any new lift of a mine while being worked for the purpose of making communication between said two outlets, so long as not more than twenty persons are employed at any one time in such mine or new lift of a mine; neither shall it apply to any mine or part of a mine in which the second outlet has been rendered unavailable by reason of the final robbing of pillars previous to abandonment, so long as not more than twenty persons are employed therein at any one time. The cage or cages and other means of egress shall, at all times, be available for the persons employed where there is no second outlet.

Section 2. The owner, operator or superintendent of any mine to which there is only one shaft, slope or outlet may petition the court of common pleas in which such mine is situated, which said court is hereby empowered to act in the premises, setting forth that, in consequence of intervening lands between the working of his mine and the most practicable point, or the only practicable point, as the case may be, at

which to make or bring to the surface from the working of his mine, he is unable to make an additional shaft, slope or outlet in accordance with the requirements of this act, whereupon the court may make an order of reference and appoint three disinterested persons, residents of the county, viewers, one or more of whom shall be a practical mining engineer, all of whom, after being sworn to a faithful discharge of their duties, shall view and examine the premises and determine as to whether the owner shall have the privilege of making an additional outlet through or upon any intervening lands, as the case may require, and report in writing to the court, which report shall be entered and filed of record. If the finding of the viewers, or any two of them, is in favor of the owner of such coal mine or colliery, he may make an additional shaft, slope or outlet under, through or upon intervening lands, as may be determined upon and provided for by the award. If the finding of the viewers is against the owner, or if no award be made by reason of any default or neglect on the part of the owner, he shall be bound to comply with the provisions of this act in the same manner as if this section had not been enacted. In case the said owner, operator or superintendent desires to, and claims that he ought to make an additional opening under, through or upon any adjoining or intervening lands, to meet the requirements of this act, for the ingress and egress of the men employed in his or their mine, he or they shall make a statement of the facts in the petition, with a survey, setting forth the point of commencement and the point of termination of the proposed outlet which he or they, their engineers, agents or employes may enter upon said intervening lands and survey and mark, as he or they shall find it proper to adopt for such additional outlet, doing as little damage as possible to the property explored; and the viewers shall state in their report what damage will be sustained by the owner or owners of the intervening lands by the opening, constructing and using of the outlet, and if the report is not appealed from, it shall be confirmed or rejected by said court, and any further and all proceedings in relation thereto shall be in conformity with like proceedings as in the case

of a lateral railroad across or under intervening lands,

Court shall ap-

They shall be sworn and shall examine the prem-

Shall report to the

Owner may make additional opening if report is favor

Must comply with

Proceedings where owner desires to make additional opening.

Shall make a statement of facts, etc.

Proceedings in relation to opening shall be same as for lateral railroad.

under the act in relation to lateral railroads, approved the fifth day of May, Anno Domini one thousand eight hundred and thirty-two, and the supplements thereto, so far as the provisions of the same are applicable hereto; and the notices to the owner of intervening lands, of the intention to apply for the privilege of making an outlet and meeting of the viewers shall be given, and the costs of the case shall be paid as provided in the said act of fifth day of May, Anno Domini one thousand eight hundred and thirty-two, and the supplements thereto.

How notice shall be given and costs paid.

Appliances for escape in case of accident. Section 3. The escapements, shafts or slopes shall be fitted with safe and available appliances by which the persons employed in the mine may readily escape in case an accident occurs deranging the hoisting machinery at the main outlets.

Separate traveling way.

Section 4. In slopes where the angle of inclination is fifteen degrees or less there must be provided a separate traveling way, which shall be maintained in a safe condition for travel and kept free from steam and dangerous gases.

No inflammable structures shall be erected over openings.

Section 5. No inflammable structure, other than a frame to sustain pulleys or sheaves, shall be erected over the entrance of any opening connecting the surface with the underground workings of any mine, and no "breaker" or other inflammable structure for the preparation or storage of coal shall be erected nearer than two hundred (200) feet to any such opening, but this act shall not be construed to prohibit the erection of a fan drift for the purpose of ventilation, or of a trestle for the transportation of cars from any slope to such breaker or structure; neither shall it apply to any shaft or slope until the work of development and shipment of coal has commenced: Provided, That this section shall not apply to breakers that are now erected.

Structures permitted.

Top of shaft shall be securely fenced.

Section 6. The top of each shaft and also of each slope, if dangerous, or any intermediate lift thereof, shall be securely fenced off by railing or by vertical or flat gates.

Abandoned slope shall be fenced.

Section 7. Every abandoned slope, shaft, air-hole and drift shall be properly fenced around or across its entrance.

Underground entrances shall be fenced,

Section 8. All underground entrances to any places not in actual course of working or extension shall be

No. 12.

properly fenced across the whole width of such entrances, so as to prevent persons from inadvertently entering the same.

Section 9. The owner, operator or superintendent of any coal mine or colliery which is worked by shaft or slope, shall provide and maintain a suitable appliance by or through which conversation can be held by and between persons at the bottom and at the top of the shaft or slope, and also an efficient means of signaling from the bottom of such shaft or slope to the engineer in charge of the hoisting engine.

Speaking tubes shall be provided.

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Signals shall be

Section 10. Hand rails and efficient safety catches shall be attached to, and a sufficient cover overhead shall be provided on every cage used for lowering or hoisting persons in any shaft.

Hand rails shall be attached to every cage.

Section 11. Whenever practicable, every cage or gun-boat used for lowering or hoisting persons in any slope, shall be provided with a proper protector, so constructed that persons, while on such cage or gunboat, shall not be struck by anything which may fall or roll down said slope.

Cages, etc., shall be protected.

Section 12. The main link of the chain connecting Main link, etc., shall be of best the rope to the cage, gun-boat or car in any shaft or quality of iron. slope, shall be made of the best quality of iron. dle chains made of the same quality of iron shall be attached to the main link, rope or rope socket from the cross-head of the cage or gun-boat when persons are being lowered or hoisted thereon.

Section 13. The ropes, safety catches, links and chains shall be carefully examined every day they are used, by a competent person delegated for that purpose and any defects therein found, by which life or limb may be endangered, shall be immediately remedied.

Ropes, etc., shall be examined every

Section 14. An efficient brake shall be attached to every drum that is used for lowering or raising persons or material in any mine.

Efficient brake to every drum.

Section 15. Flanges or horns of sufficient dimensions to prevent the rope from slipping off the said drum shall be provided and properly attached to the drum, and all machines used for lowering or hoisting persons in mines shall be provided with an indicator Indicators, to show the position of the cage, car or gun-boat in the shaft or slope.

Flanges to prevent rope from supping off drum.

Substantial structure to sustain pulley.

Material must not fall into shart.

When structure for pulley shall be erected.

How truck for landing buckets shall be constructed.

Rock and coal to be raised in buckets.

Safety hook.

Guides to prevent bucket from swinging.

If strata are not safe shaft shall be cased.

Rules to be observed in mines. Section 16. Over all shafts which are being sunk or shall hereafter be sunk, a safe and substantial structure shall be erected to sustain the sheaves or pulleys, at a height of not less than twenty (20) feet above the tipping-place, and the top of such shaft shall be arranged in such manner that no material can fall into the shaft while the bucket is being emptied.

Section 17. The said structure shall be erected as soon as a substantial foundation is obtained, and in no case shall a shaft be sunk to a depth of more than fifty (50) feet without such structure.

Section 18. If provision is made to land the bucket upon truck, the said truck shall be constructed in such manner that material cannot fall into the shaft.

Section 19. All rock and coal from shafts as they are being sunk, shall not be raised except in a bucket or on a cage, and such bucket or cage must be connected to the rope or chain by a safety hook, clevis or other safe attachment.

Section 20. Such shafts shall be provided with

Section 20. Such shafts shall be provided with guides and guide attachments applied in such manner as to prevent the bucket from swinging while descending or ascending therein, and such guides and guide attachments shall be maintained at a distance of not more than seventy-five (75) feet from the bottom of such shaft, until its sinking shall have been completed, but this section shall not apply to shafts one hundred (100) feet or less in depth.

Section 21. Where the strata are not safe every shaft shall be securely cased, lined or otherwise made secure.

Section 22. The following rules shall be observed, as far as practicable, in every shaft to which this act applies.

First. After each and every blast the chargeman must see that all loose material is swept down from the timbers before the workmen descend to their work.

Second. After a suspension of work, and also after firing a blast in a shaft where explosive gases are evolved, the person in charge must have the said shaft examined and tested with a safety lamp before the workmen are allowed to descend.

Third. Not more than four persons shall be lowered or hoisted in any shaft on a bucket at the same time, and no person shall ride on a loaded bucket.

Fourth, Whenever persons are employed on platforms in shafts the person in charge must see that the said platforms are properly and safely constructed.

Fifth. While shafts are being sunk all blasts therein must be exploded by an electric battery.

Every person who fails to comply with or who violates the provisions of this article shall be guilty of an offense against this act.

### ARTICLE V

Boilers and Connections, Machinery, &c.

Section 1. All boilers used for generating steam in and about mines and collieries shall be kept in good order, and the owner, operator or superintendent shall have them examined and inspected by a qualified person as often as once in six months, and oftener if needed. The result of such examination, under oath, shall be certified in writing to the inspector for the district within thirty (30) days thereafter.

Boilers shall be kept in good order and shall be examined, etc.

Section 2. It shall not be lawful to place any boiler or boilers, for the purpose of generating steam, under or nearer than one hundred (100) feet to any coal breaker or other structure in which persons are employed in the preparation of coal: Provided, That this Proviso. section shall not apply to boilers or breakers already erected.

Boilers shall not be nearer the breaker than 100

Section 3. Each nest of boilers shall be provided with a safety valve of sufficient area for the steam to escape and with weights or springs properly adjusted.

Safety valve for

Steam gauges.

Section 4. Every boiler house shall be provided with a steam gauge properly connected with the boilers, to indicate the steam pressure, and another steam gauge shall be attached to the steam pipe in the engine house and placed in such position that the engineer or fireman can readily examine them and see what pressure is carried. Such steam gauges shall be kept in good order, tested and adjusted as often as once in every six months and their condition reported to the inspector in the same manner as the report of boiler inspection.

Gauges must be tested every six months and re-ported to inspector.

Section 5. All machinery used in or about the mines and collieries, and especially in breakers, such as en- or covered. gines, rollers, wheels screens, shafting and belting shall be protected by covering or railing so as to pre-

All machinery

Stairs, etc., shall have guard rail.

vent persons from inadvertently walking against or falling upon the same. The sides of stairs, trestles and dangerous plank walks in and around the collieries shall be provided with hand and guard railing to prevent persons from failing over their sides. This section shall not forbid the temporary removal of a fence, guard rail or covering for the purpose of repairs or other operations, if proper precautions are used, and the fence, guard rail or covering is replaced immediately thereafter.

Temporary removal of fence.

Engineer shall be competent and over eighteen years old. Section 6. A sober and competent person, not under eighteen (18) years of age, shall be engaged to run the breaker engine and he shall attend to said engine while the machinery is in motion.

Signal apparatus on breaker.

Section 7. A signal apparatus shall be established at important points in every breaker so that in case of an accident the engineer can be promptly notified to stop the machinery.

Oiling machinery.

Section 8. No person under fifteen (15) years of age shall be appointed to oil the machinery, and no person shall oil dangerous parts of such machinery while it is in motion.

Loitering around or interfering with machinery prohibited. Section 9. No person shall play with, loiter around or interfere with any machinery in or about any mine or colliery.

Offense against this act.

Section 10. Failure to comply with the provisions of this article shall be deemed an offense against this act.

### ARTICLE VI

### Wash Houses

Wash house shall be provided at request of twenty or more miners. Section 1. It shall be the duty of the owner, operator or superintendent of each mine or colliery, at the request in writing of twenty or more men employed in any of the mines, to provide a suitable building, not an engine or boiler house, which shall be convenient to the principal entrance of such mine, for the use of the persons employed therein for the purpose of washing themselves and changing their clothes when entering the mine and returning therefrom. The said building shall be maintained in good order, be properly lighted and heated, and supplied with pure cold and warm water, and shall be provided with facilities for persons to wash. If any person or persons shall

How wash house shall be kept and supplied.

require.

neglect or fail to comply with the provisions of this Penalty for failure article, or maliciously injure or destroy, or cause to this provision. be injured or destroyed, the said building, or any part thereof, or any of the appliances or fittings used for supplying light, heat and water therein, or doing any act tending to the injury or destruction thereof, he or they shall be deemed guilty of an offense against this act.

to comply with

### ARTICLE VII

### Ambulances and Stretchers

Section 1. The owner, operator or superintendent of Owner shall keep every mine or colliery, except as hereinafter provided, stretchers at mine. shall provide and keep at such mine or colliery an ambulance and also at least two (2) stretchers, for the purpose of conveying to their places of abode, any person or persons who may be injured while in the discharge or his or their work at such mine or colliery.

Section 2. The said ambulance shall be constructed upon good, substantial and easy springs. It shall be covered and closed and shall have windows on the sides or ends. It shall be of sufficient size to convey at least two (2) injured persons with two (2) attendants at one time, and shall be provided with spring mattresses or other comfortable bedding to be placed on rolled frames, together with sufficient covering and protection for convenient movement of the injured. It shall also be provided with seats for the attendants. The stretchers shall be constructed of such ma- construction of terial and in such manner as to afford the greatest ease and comfort in the carriage of the injured person.

Construction of ambulance.

stretchers.

Section 3. Whenever any person or persons employed in or about a mine or colliery shall receive such injury by accident or otherwise, while so employed, as would render him or them unable to walk to his or their place of abode, the owner, operator or superintendent of such mine or colliery shall immediately cause such person or persons to be removed to his or their place of abode or to a hospital as the case may

Person injured shall be removed to his home or to hospital.

Section 4. It is provided, however, that the owner, operator or superintendent of any mine or colliery shall be excepted from the requirements of an ambu-

When ambulance need not be pro-vided.

lance, as aforesaid, if the places of abode of all the workmen at such mine or colliery be within a radius of a half mile from the principal entrance to such mine.

When one ambulance may supply two collieries. Section 5. It is provided further, that where two or more mines or collieries are located within one mile of each other, or the ambulance is located within one mile of each colliery, but one ambulance, as aforesaid, shall be required, if the said mines or collieries have ready and quick means of communication, one with the other, by telegraph or telephone.

If less than 20 persons employed no ambulance required,

Section 6. An ambulance, as aforesaid, shall not be required at any mine or colliery at which less than twenty (20) persons are employed.

When railway may be used instead of ambulance. Section 7. In case the distance from any mine or colliery to the place of abode of the person injured, is such as to permit his conveyance to his home or to a hospital more quickly and conveniently by railway, such mode of conveyance shall be permitted, but in such case the conveyance must be under cover and the comfort of the injured person must be provided for.

### ARTICLE VIII

### Certified Mine Foremen

Mine foreman or assistant must have certificate.

Section 1. It shall not be lawful, neither shall it be permitted, for any person or persons to act as mine foreman or assistant mine foreman of any coal mine or colliery, unless they are registered as a holder of a certificate of qualification or service under this act.

Certificate shall be granted by Secretary of Internal Affairs after satisfactory examination by the Examiners. Section 2. Certificates of qualification to mine foremen and assistant mine foremen shall be granted by the Secretary of Internal Affairs to every applicant who may be reported by the examiners, as hereinafter provided, as having passed a satisfactory examination and as having given satisfactory evidence of at least five years' practical experience as a miner, and of good conduct, capability and sobriety.

Experience.

The certificate shall be in manner and form as shall be prescribed by the Secretary of Internal Affairs, and a record of all certificates issued shall be kept in his department.

Form and record of certificates.

Section 3. For the purpose of examination of candidates for such certificates, a board of examiners shall

Board of Examiners in each district.

be appointed in each of the inspection districts pro- who shall serve on such beard. vided for by this act. The said board shall consist of the district inspector of mines, two (2) practical miners and one owner, operator or superintendent of a mine. The said inspector shall act ex-officio, and the said engineer and owner, operator or superintendent shall be appointed in like manner and at the same time as the boards of examiners for candidates for mine inspectorship under this act are now appointed. The said board shall act as such for the period of one year from the date of their appointment. Meetings of the board may be held at any time, and they may make such rules and conduct such examinations as in their judgment may seem proper for the purpose of such examinations. The said board shall report their action to the Secretary of Internal Affairs, and at least three (3) of the members thereof shall certify to the qualification of each candidate who has passed such examination. The traveling expenses of the members of such board to and from their place of meeting, together with the sum of five dollars per day each to the said two (2) practical miners and owner, operator or superintendent, members of each board, for each day they are actually engaged therein, not exceeding ten (10) days in all, during the year, shall be paid by the Commonwealth on an order of the Auditor General drawn on the State Treasurer upon the certificate of the mine inspector, member of such board.

Term of board.

Meetings and

Report.

Compensation.

How paid.

Certificates of mine foremen.

Section 4. Certificates of qualification to mine foremen and assistant mine foremen shall be granted by the Secretary of Internal Affairs to every applicant who may be reported by the examiners, as heretofore provided, as having passed a satisfactory examination and as having given satisfactory evidence of at least five (5) years' practical experience as a miner, and of good conduct, capability and sobriety. The certificate, cate shall be in manner and form as shall be prescribed by the Secretary of Internal Affairs, and a record of all certificates issued shall be kept in the department. Certificates of qualification and certificates of service shall contain the full name, age and place of birth of the applicant, as also the length and nature of his previous service in or about the mines.

Fees for certifi-

Section 5. Before certificates as aforesaid shall be granted applicants for same shall pay to the Secretary of Internal Affairs the following fee, namely:

For examination, one dollar; for registration of certificate, one dollar, for certificate, one dollar. All fees so received shall be covered into the treasury of the Commonwealth.

Penalty for operating mine without a foreman. Section 6. No mines shall be operated for a longer period than thirty days without the supervision of a mine foreman. In case any mine is worked a longer period than thirty (30) days without such certified mine foreman, the owner, operator or superintendent thereof shall be subject to a penalty of twenty dollars per day for each day over the said thirty (30) days during which the said mine is operated.

When copy of certificate may issue.

Section 7. In case of the loss or destruction of a certificate the Secretary of Internal Affairs may supply a copy thereof to the person losing the same upon the payment of the sum of fifty (50) cents: Provided, It shall be shown to the satisfaction of the Secretary that the loss has actually occurred.

Forgery of a certificate or making a false statement in same shall be a misdemeanor.

Section 8. If any person or persons shall forge or counterfeit a certificate or knowingly make or cause to be made any false statement in any certificate under this act, or in any official copy of the same, or shall urge others to do so, or shall utter or use any such forged or false certificate, or unofficial copy thereof, or shall make, give, utter, produce or make use of any false declaration, representation or statement in any such certificate of copy thereof, or any document containing the same, he or they shall be guilty of a misdemeanor, and upon conviction thereof, shall be fined two hundred dollars, or imprisoned for a term not exceeding one (1) year, or both, at the discretion of the court trying the case.

Penalty.

Fire boss must have five years' experience, etc.

Section 9. And no person shall be permitted to act as fire boss in any coal mine or colliery, unless he has had five (5) years' practical experience in mines as a miner, three (3) of which he shall have had as a miner in mines wherein noxious and explosive gases are evolved, and the said fire boss shall certify to the same before entering upon his duties, before an alderman, justice of the peace or other person authorized to administer oaths, and a copy of said deposition shall

He shall certify to experience.

be filed with the district inspector of mines wherein said person is employed.

### ARTICLE IX

# Employment of Boys and Females

Section 1. No boy under the age of fourteen (14) No boy under 14 years and no females, and no woman or girl of any age, shall be employed in mines. years, and no woman or girl of any age, shall be employed or permitted to be in any mine for the purpose of employment therein. Nor shall a boy under the age of twelve years or a woman or girl of any age, be employed or permitted to be in or about the outside structures or workings of a colliery for the purpose of employment, but it is provided, however, that this Shall not apply to clerical work. prohibition shall not affect the employment of a boy or female of suitable age in an office or in the performance of clerical work at a colliery.

Section 2. When an employer is in doubt as to the age of any boy or youth applying for employment in or about a mine or colliery, he shall demand and receive proof of the said lawful employment age of such boy or youth, by certificate from the parent or guardian, before said boy or youth shall be employed.

How age shall be determined.

Section 3. If any person or persons contravene or Penalty. fail to comply with the provisions of this act in respect to the employment of boys, young male persons or females, or if he or they shall connive with or permit others to contravene or fail to comply with said provisions, or if a parent or guardian of a boy or young male person make or give a false certificate of the age of such boy or young male person, or knowingly do or perform any other act for the purpose of securing employment for a boy or young male person under the lawful employment age and in contravention of the provisions of this act, he or they shall be guilty of an offense against this act.

### ARTICLE X

### Ventilation

Section 1. The owner, operator or superintendent Pure air shall be of every mine shall provide and maintain a constant and adequate supply of pure air for the same, as hereinafter provided.

provided in mines.

Use of furnaces prohibited in certain mines.

Minimum quantity of air to be produced, Section 2. It shall not be lawful to use a furnace for the purpose of ventilating any mine wherein explosive gases are generated.

Section 3. The minimum quantity of air thus produced, shall not be less than two hundred (200) cubic feet per minute for each and every person employed in any mine, and as much more as the circumstances may require.

Ventilating currents, how distributed.

Section 4. The ventilating currents shall be conducted and circulated to and along the face of each and every working place throughout the entire mine, in sufficient quantities to dilute, render harmless and sweep away smoke and noxious or dangerous gases, to such an extent that all working places and traveling roads shall be in a safe and fit state to work and travel therein.

Abandoned parts of mine in operation shall be kept free of gas. Section 5. All worked-out or abandoned parts of a mine in operation, so far as practicable, shall be kept free of dangerous bodies of gases or water, and if found impracticable to keep the entire mine free from an accumulation of gases or water, the mine inspector must be immediately notified.

Mine shall be divided into districts. Section 6. Every mine employing more than seventy-five (75) persons must be divided into two or more districts. Each district shall be provided with a separate split of pure air and the ventilation shall be so arranged, that not more than seventy-five persons shall be employed at the same time in any one current or split of air.

Not more than 75 persons shall have the same current of pure air.

The inlet and return air passages for any particular district must be separated by a pillar of coal or stone, if the thickness and dip of the vein will permit, except where it is necessary to cut through said dividing pillar for the purposes of ventilation, traffic or drainage.

When inlet and return air passages shall be separated.

Area of air passages.

Velocity.

Section 7. All air passages shall be of sufficient area to allow the free passage of not less than two hundred (200) cubic feet of air per minute for every person working therein; and in no case, in mines generating explosives gases, shall the velocity exceed four hundred and fifty (450) lineal feet per minute, in any opening through which the air currents pass, if gauze safety lamps are used, except in the main inlet or outlet air ways.

No. 12.

Section 8. All cross-cuts connecting the main inlet and outlet air passages of every district, when it becomes necessary to close them permanently, shall be substantially closed with brick or other suitable building material, laid in mortar or cement whenever practicable, but in no case shall said air stoppings be constructed of plank except for temporary purposes.

substantially closed.

Section 9. All doors used in assisting or in any way affecting the ventilation shall be so hung and adjusted that they will close automatically.

Doors must close automatically.

Section 10. All main doors shall have an attendant whose constant duty it shall be to open them for transportation and travel and prevent them from standing open longer than is necessary for persons or cars to pass through.

Main doors must have an attendant.

Section 11. All main doors shall be so placed that How main doors shall be placed. when one door is open, another, which has the same effect upon the same current, shall be and remain closed and thus prevent any temporary stoppage of the air current.

Section 12. An extra main door shall be so placed Extra main door. and kept standing open, as to be out of reach of accident, and so fixed that it can be at once closed in the event of an accident to the doors in use.

Section 13. The frame work of such main doors shall be substantially secured in stone or brick, laid in mortar or cement unless otherwise permitted in writing by the inspector.

Frame work of main doors.

Section 14. All permanent air bridges shall be substantially built of such material and such strength as the circumstances may require.

Permanent air bridges, how built.

Section 15. The quantities of air in circulation shall be ascertained with an anemometer or other efficient instrument; such measurements shall be made by the inside foreman or his assistant once a week at the inlet and outlet airways, also at or near the face of each gangway and at the nearest cross-heading to the face of each gangway and at the nearest cross-heading to the face of the inside and outside chamber or breast where men are employed, and the heading shall not be driven more than sixty (60) feet from the face of each chamber or breast and shall be entered in the colliery report book.

Air measurements.

By whom made.

Headings shall not be driven more than 60 feet.

Report of air measurements to be sent to inspectors, also number employed in each district,

Section 16. A report of these air measurements shall be sent to the inspector before the twelfth day of each month, for the preceding month, together with a statement of the number of persons employed in each district.

Ventilators must have recording instruments. Section 17. All ventilators used at mines shall be provided with recording instruments by which the speed of the ventilators or the ventilating pressure shall be registered for each hour, and such data shall be preserved at the colliery for future reference, for a period of three months.

Penalty.

Section 18. Any person or persons who shall neglect or fail to comply with the provisions of this article, or who shall make any false report in regard to air measurements, shall be guilty of an offense against this act.

#### ARTICLE XI

## Props and Timbers

Props and timbers must be furnished workmen. Section 1. It shall be the duty of the owner, operator, superintendent or mine foreman of every mine to furnish to the miners all props, ties, rails and timbers necessary for the safe mining of coal and for the protection of the lives of the workmen. Such props, ties, rails and timbers shall be suitably prepared and shall be delivered to the workmen as near to their working places as they can be conveyed in ordinary mine cars, free of charge.

Workman shall notify mine foreman of timbers needed. Section 2. Every workman in want of props, ties, rails or timbers shall notify the mine foreman or his assistant of the fact at least one day in advance, giving the length of the props or timber required; and in case of danger from loose roof or sides, he shall not continue to cut or load coal until the said props and timber have been properly furnished and the place made secure.

Work shall stop in certain cases.

Failure to comply shall be deemed an offense Section 3. A failure to comply with the provisions of this article shall be deemed an offense against this act, and shall be taken to be negligence per se on the part of the owner, operator, superintendent or mine foreman, as the case may be, of such mine, in action for the recovery of damages for accidents resulting from the insufficient propping of such mine, through failure to furnish the necessary props or timbers.

## ARTICLE XII

#### General Rules

The following general rules shall be observed in every mine to which this act applies:

Rule 1. The owner, operator or superintendent of Must have mine a mine or colliery shall use every precaution to ensure the safety of the workmen in all cases, whether provided for in this act or not, and he shall place the underground workings thereof, and all that is related to the same, under the charge and daily supervision of a competent person who shall be called "mine foreman."

Rule 2. Whenever a mine foreman cannot personally carry out the provisions of this act so far as they pertain to him, the owner, operator or superintendent snall authorize him to employ a sufficient number of competent persons to act as his assistants, who shall be subject to his orders.

Assistant mine foreman.

Rule 3. The mine foreman shall have charge of all matters pertaining to ventilation, and the speed of the ventilators shall be particularly under his charge when superintendand direction; and any superintendent who shall cause able. the mine foreman to disregard the provisions of this act shall be amenable in the same manner as the mine foreman.

ent shall be amen-

Rule 4. All accessible parts of an abandoned portion of a mine in which explosive gases have been found, shall be carefully examined by the mine foreman or his assistants at least once a week, and all danger found existing therein shall be immediately removed. A report of said examination shall be recorded in a book kept at the colliery for that purpose and signed by the person making the same.

Abandoned portions of mine shall be examined.

Report shall be kept.

Examination of mines generating gases.

Rule 5. In mines generating explosive gases, the mine foreman or his assistant shall make a careful examination every morning of all working places and traveling roads and all other places which might endanger the safety of the workmen, before the workmen shall enter the mine, and such examination shall be made with a safety lamp within three (3) hours at most, before time for commencing work, and a workman shall not enter the mine or his working place until the said mine or part thereof and working place Report shall be kept.

are reported to be safe. Every report shall be recorded without delay in a book which shall be kept at the colliery for the purpose and shall be signed by the person making the examination.

Proof of examination must be marked on face. Rule 6. The person who makes said examination shall establish proof of the same by marking plainly the date thereof at the face of each working place and all other places examined.

Stations to be established.

Rule 7. A station or stations shall be established at the entrance to each mine or different parts of each mine, as the case may require, and a workman shall not pass beyond any such station until the mine or part of the mine beyond the same has been inspected and reported to be safe. It shall be the duty of the fire boss to remain at the danger station until relieved by some person authorized by himself or the mine foreman, who shall stand guard until said mine or part of mine shall be reported safe, and he shall not let any person pass without permission from the fire boss.

Fire boss shall have charge of danger stations.

No one shall pass until mine is reported safe.

When noxious gases are found all workmen to be withdrawn until reported safe.

Rule 8. If at any time it is found by the person for the time being in charge of the mine or any part thereof, that by reason of noxious gases prevailing in such mine or such part thereof, or of any cause whatever the mine or the said part is dangerous, every precaution shall be used to ensure the safety of the workmen; and every workman, except such persons as may be required to remove the danger, shall be withdrawn from the mine, or such part thereof as is so found dangerous, until the said mine or said part thereof is examined by a competent person and reported by him to be safe.

Only safety lamps to be used in certain mines. Rule 9. In every working approaching any place where there is likely to be accumulation of explosive gases, or in any working in which danger is imminent from explosive gases, no light or fire other than a locked safety lamp shall be allowed or used. Whenever safety lamps are required in any mine they shall be the property of the owner of said mine, and a competent person, who shall be appointed for the purpose, shall examine every safety lamp immediately before it is taken into the workings for use, and ascertain it to be clean, safe and securely locked, and safety lamps shall not be used until they have been so examined and found safe, clean and securely

locked, unless permission be first given by the mine foreman to have the lamps used unlocked.

Rule 10. No one, except a duly authorized person, keys for safety shall have in his possession a key or any other contrivance for the purpose of unlocking any safety lamp in any mine where locked lamps are used. No lucifer matches or any other apparatus for striking light shall be taken into said mine or parts thereof.

Rule 11. No blast shall be fired in any mine where Firing of blasts. locked safety lamps are used except by permission of the mine foreman or his assistants, and before a blast is fired, the person in charge must examine the place and adjoining places and satisfy himself that it is safe to fire such blast before such permission is given.

Rule 12. The mine foreman or his assistant shall visit and examine every working place in the mine at least once every alternate day, while the men of such place are or should be at work, and shall direct that each and every working place is properly secured by props or timbers, and that safety in all respects is assured by directing that all loose coal or rock shall be pulled down or secured, and that no person shall be permitted to work in an unsafe place unless it be for the purpose of making it secure.

Mine foreman shall visit mine.

Rule 13. The mine foreman, or some other compe- Mine foreman tent person or persons to be designated by him, shall slopes, etc. examine at least once every day all slopes, shafts, main roads, traveling ways, signal apparatus, pulleys and timbering and see that they are in safe and efficient working condition.

shall examine

Rule 14. Any person having charge of a working Roofs and sides must be properly place in any mine shall keep the roof and sides thereof secured. properly secured by timber or otherwise so as to prevent such roof and sides from falling, and he shall not do any work or permit any work to be done under loose or dangerous material except for the purpose of securing the same.

Rule 1.). Whenever a place is likely to contain a Accumulation of dangerous accumulation of water, the working approaching such place shall not exceed twelve (12) feet in width and there shall be constantly kept at a distance of not less than twenty (20) feet in advance, at least one (1) bore hole near the center of the working and sufficient flank bore holes on each side.

Riding on loaded cars prohibited.

Number of persons to be hoisted or lowered at one time.

Twenty persons may be hoisted or lowered in mine where two cars are used, if thirty workmen make request.

May reduce the number of persons to be hoisted or lowered.

Qualifications of engineer.

How engineer shall work engine.

Duty of engineer in charge of hoisting apparatus. Rule 16. No person shall ride upon or against any loaded car, cage or gun-boat in any shaft, slope or plane in or about a mine or colliery.

Rule 17. Not more than ten (10) persons shall be hoisted or lowered at any one time in any shaft or slope, and whenever five persons shall arrive at the bottom of any shaft or slope in which persons are regularly hoisted or lowered they shall be furnished with an empty car or cage and be hoisted, except however, in mines where there is provided a traveling way having an average pitch of fifteen (15) degrees or less and not more than one thousand (1,000) feet in length. This, however, shall not prohibit the hoisting or lowering of twenty (20) persons at one time on slopes where two (2) or more loaded cars are regularly hoisted: Provided, That not less than thirty (30) workmen working therein, make such request in writing, to the inspector of the district, and if, in his judgment, the hoisting appliances in every respect are of sufficient strength, he may comply with the request of the workmen.

'Provided, That in any coal mine or colliery where the hoisting appliances are not of sufficient strength to hoist or lower the number of persons named, he shall have the power to reduce the number of persons to be hoisted or lowered.

Rule 18. An engineer placed in charge of an engine whereby persons are hoisted or lowered in any mine, shall be a sober and competent person of not less than twenty-one (21) years of age.

Rule 19. Every engineer shall work his engine slowly and with great care when any person is being lowered or hoisted in a shaft or slope and no one shall interfere with or intimidate him while in the discharge of his duties.

Rule 20. An engineer who has charge of the hoisting machinery by which persons are lowered or hoisted in a mine, shall be in constant attendance for that purpose during the whole time any person or persons are below ground, and he shall not allow any person or persons, except such as may be deputed by the owner, operator or superintendent, to handle or meddle with the engine under his charge or any part of its machinery.

Rule 21. When any person is about to descend or Signals for asascend a shaft or slope, the headman or footman, as the case may be, shall inform the engineer by signal or otherwise of the fact, and the engineer shall return a signal before moving or starting the engine. In the absence of a headman or footman the person or persons about to descend or ascend shall give and receive the signals in the same manner.

scending.

Rule 22. The owner, operator or superintendent of Outside foreman. a colliery shall place a competent person to be called "outside foreman," in charge of the breaker and the outside work of such colliery, who shall direct and as far as practicable, see that the provisions of this act are complied with in respect to the breakers, outside machinery, ropes, cages and all other things pertaining to the outside work, unless otherwise provided for in this act.

Rule 23. In all coal breakers where the coal dust is Dust in breaker. so dense as to be injurious to the health of persons employed therein, the owner, operator or superintendent of said breaker shall, upon the request of the inspector, immediately adopt measures for the removal of the dust as far as practicable.

Rule 24. Any miner or other workman who shall discover anything wrong with the ventilating current or with the condition of the roof, side, timber or roadway, or with any other part of the mine in general, such as would lead him to suspect danger to himself or his fellow workmen or to the property of his employer, shall immediately report the same to the mine foreman or other person, for the time being in chage of that portion of the mine.

Ventilati.: g current or roof, ttc., out of order must be reported to mine foreman

Rule 25. Any person or persons who shall knowingly or wilfully damage, or without proper authority, any mine or remove or render useless any fencing, means of signaling, apparatus, instrument or machine, or shall throw open or obstruct any airway, or open a ventilating door and not have the same closed, or enter a place in or about a mine against caution, or carry fire, open lights or matches in places where safety lamps are used, or handle without proper authority, or disturb any machinery or cars, or do any other act or thing whereby the lives or health of persons or the security of the property in or about a mine or colliery

Wilful damage to

Carrying fire or

are endangered, shall be guilty of an offense against this act.

Care of explo-

Rule 26. Gunpowder or any other explosive shall not be stored in a mine, and a workman shall not have at any time in any one place, more than one keg or box containing twenty-five (25) pounds, unless more is necessary for a person to accomplish one day's work.

How explosives shall be kept.

Rule 27. Every person who has gunpowder or other explosive in a mine, shall keep it in a wooden or metallic box securely locked, and such box shall be kept at least ten (10) feet from the tracks in all cases where room at such a distance is available.

Manner of handling explosives. Rule 28. Whenever a workman shall open a box containing explosive or while in any manner handling the same, he shall first place his lamp not less than five (5) feet from such explosive and in such a position that the air current cannot convey sparks to it, and a workman shall not approach nearer than five (5) feet to an open box containing powder, with a lamp, lighted pipe or any other thing containing fire.

Storage, etc., must be in accordance with special rules by manufacturers of explosives.

Rule 29. When high explosives other than gun powder are used in any mine, the manner of storing, keeping, moving, charging and firing or in any manner using such explosives, shall be in accordance with special rules as furnished by the manufacturers of the same. The said rules shall be endorsed with his or their official signature and shall be approved by the owner, operator or superintendent of the mine in which such explosives are used.

And approved by owner.

Manner of charging holes for blasting.

Tamping bar.

Rule 30. In charging holes for blasting in slate or rock in any mine, no iron or steel-pointed needle shall be used, and a tight cartridge shall not be rammed into a hole in coal, slate or rock with an iron or steel tamping bar, unless the end of the tamping bar is tipped with at least six (6) inches of copper or other soft metal.

When a charge misses fire.

Rule 31. A charge of powder or any other explosive in slate or rock which has missed fire shall not be withdrawn or the hole reopened.

Must not shorten the match, etc. Rule 32. A miner or other person who is about to explode a blast by the use of patent or other squibs or matches, shall not shorten the match, nor saturate it with mineral oil, nor turn it down when placed in the hole, nor ignite it except at its extreme end, nor do

anything tending to shorten the time the match will burn.

Rule 33. When a workman is about to fire a blast Before firing blast he shall be careful to notify all persons who may be in danger therefrom, and shall give sufficient alarm before and after igniting the match so that any person or persons who may be approaching shall be warned of the danger.

Rule 34. Before commencing work and also after Must examine the firing of every blast, the miner working a breast or any other place in a mine, shall enter such breast or place to examine and ascertain its condition, and his laborer or assistant shall not go to the face of such breast or place until the miner has examined the same and found it to be safe.

Rule 35. No person shall be employed to blast coal or rock unless the mine foreman is satisfied that such person is qualified, by experience and judgment, to perform the work with ordinary safety.

Blaster must be qualified to do such work.

Rule 36. A person who is not a practical miner shall not charge or fire a blast in the absence of an exper. Inexperienced ienced miner, unless he has given satisfactory evidence of his ability to do so with safety, and has obtained permission from the mine foreman or person in charge.

miners shall not fire a blast.

Rule 37. An accumulation of gas in mines shall not Removal of gas. be removed by brushing where it is practicable to remove it by brattice.

Rule 38. When gas is ignited by blast or otherwise, Ignited gas must be extinguished. the person igniting the same shall immediately extinguish it, if possible, and notify the mine foreman or his assistant of the fact, and workmen must see that no gas blowers are left burning upon leaving their working places.

Rule 39. Every fireman in charge of a boiler or boilers for the generation of steam, shall keep a constant watch of the same. He shall see that the steam pressure does not at any time exceed the limit allowed by the outside foreman or superintendent. He shall frequently try the safety valve, and shall not increase the weight on the same. He shall maintain a proper depth of water in each boiler, and if anything should happen to prevent this, he shall report the same without delay to the foreman, for the time be-

Duties of fireman in charge of boliing in charge, and take such other action as may under the particular circumstances be necessary for the protection of life and preservation of property.

Headman and footman.

Rule 40. At every shaft or slope in which provision is made in this act for lowering and hoisting persons, a headman and footman shall be designated by the superintendent or foreman to be at their proper places from the time that persons begin to descend, until all the persons who may be at the bottom of said shaft or slope when quitting work shall be hoisted. Such headman and footman shall personally attend to the signals and see that the provisions of this act, in respect to lowering and hoisting persons in shafts or slopes, shall be complied with.

Jumping on ears after signal prohibited.

Duties.

Rule 41. No person, except the man giving the signal, shall jump on a car, cage or gun boat after the signal to start has been given, and if any person should enter a car, cage or gunboat in excess of the lawful number the headman or footman shall notify him of the fact and request him to get off, which request must be immediately complied with. Any violation of this rule must be reported promptly to the mine foreman.

Empty trip must be hoisted after engine has been idle one hour.

Rule 42. An empty trip shall be hoisted in any shaft or slope where the engine has been standing idle for an hour or more, before men are hoisted or lowered in said shafts or slopes, and no person or persons shall ascend any shaft or slope when working on the night turn, until one trip shall first be hoisted therein.

Construction of passage way.

Rule 43. Every passage-way used by persons in any mine and also used for transportation of coal or other material, shall be made of sufficient width to permit persons to pass moving cars with safety, but if found impracticable to make any passage-way of sufficient width, then holes of ample dimensions, and not more than one hundred and fifty (150) feet apart, shall be made on one side of said passage-way. The said passage-way and safety holes shall be kept free from obstructions and shall be well drained; the roof and sides of the same shall be made secure.

Safety holes.

Rule 44. When locomotives are used in any mine their speed shall not exceed six (6) miles per hour, and an efficient alarm shall be provided and attached to the front end of every train of cars pushed by a locomotive in any mine or part of a mine.

Speed of locomotives.

Rule 45. Locomotives propelled by steam, if using Locomotives using fire, shall not be used in any passage-way which is also used as an intake air-way to any mine or part of a mine where persons are employed, unless there be a sufficient quantity of air circulating therein to maintain a healthy atmosphere.

certain passage-

Rule 46. No person shall couple or uncouple loaded or empty cars while the same are in motion: Provided however, That this shall not apply to the top or bottom men of slopes, planes or shafts.

Coupling or uncoupling cars.

Rule 47. When cars are run on gravity roads by brakes or sprags, the runner shall only ride on the rear end of the last car, and when said cars are run by sprags, a space of not less than two (2) feet from the body of the car shall be made on one or both sides of the track, wherever it may be necessary for the runner to pass along the side of the moving car or cars, and said space or passage-way shall always be kept free from obstructions.

Cars on gravity roads run by brakes or sprags.

Passage-way of two feet shall be kept free.

Rule 48. No miner or laborer shall run cars out of any breast or chamber or on any gravity road unless he is a suitable person, employed by the mine foreman for that particular work; and no person shall be employed by any mine foreman to perform such work, under the age of sixteen (16) years.

Cars shall be run by suitable persons only.

Rule 49. Safety holes shall be made at the bottom of all slopes and planes and be kept free from obstruction to enable the footman to escape readily in case of danger.

Safety holes at bottom of slopes. etc.

Rule 50. Safety blocks or some other device for the Safety blocks. purpose of preventing cars from falling into a shaft or running away on a slope or plane, shall be placed at or near the head of every shaft, slope or plane, and said safety blocks or other device must be maintained in good working order.

Rule 51. No person shall travel on any gravity train while cars are being hoisted or lowered thereon. Whenever ten (10) persons arrive at the bottom or top of any plane on which it is necessary for men to travel, traffic thereon shall be suspended for a period of time long enough to permit them to reach the top or bottom of said plane.

Travel on gravity train prohibited.

When traffic shall be suspended on plane,

Rule 52. No mine cars shall be used in any mine unless the bumpers are of sufficient length and width to keep the bodies of said cars separated by not less

Bumpers on mine cars.

Coal breakers shall be heated.

than twelve (12) inches when the cars stand on a straight level road and the bumpers touch each other.

Rule 53. It shall be the duty of the owner, operator or superintendent of any or all coal breakers, to have them properly heated in order to prevent injury to the health of persons employed therein.

Rule 54. For the purpose of making known the rules and the provisions of this act to all persons employed in or about such mine or colliery to which this act applies, an abstract of the act and rules shall be posted up in legible characters in some conspicuous place or places at or near the mine or colliery, where they may be conveniently read by the persons employed, and so often as the same become obliterated or destroyed the owner, operator or superintendent shall cause them to be renewed with all reasonable dispatch. Any person who pulls down, injures or defaces such abstract of the act or rules when posted up in pursuance of the provisions of this act, shall be guilty of an offense against this act.

Rule 55. No person or persons working in any coal mine or colliery shall cut any props or timbers while the same are in position to support the roof or sides. When it becomes necessary to remove any of the said props or timbers for the purpose of mining coal that may be supported by the same, to dislodge any of the said props or timbers, it must be done by blasting.

Rule 56. It shall not be lawful for any mine foreman or superintendent of any mine or colliery to employ any person who is not competent to understand the regulations of any mine evolving explosive gases: Provided, That this rule will not apply to a section of mine free from the said explosive gases.

Rule 57. Any superintendent or mine foreman who prevents the footman from giving an empty car or cage to the number of men designated in a former rule, shall, upon information by any person engaged in the mines, given the mine inspector, be fined the sum of fifty dollars for each offense.

Rule 58. Every person who fails to comply with any of the foregoing rules or any of the provisions of this article, shall be guilty of an offense against this act.

Abstract of rules shall be posted up.

Penalty for destroying rules.

Cutting of props and timbers prohibited.

Must be removed by blasting.

Who shall be employed in mine evolving gases.

Exceptions.

Penalty for not giving car to men.

Penalty for failure to comply with foregoing rules.

## ARTICLE XIII

## Inquests

Section 1. Whenever loss of life to a miner or other employe occurs in or about a mine or colliery, notice promptly notified of loss of life. thereof shall be given promptly to the inspector of mines for the district in which the accident occurred, by the mine foreman or outside foreman or other person having immediate charge of the work at the time of the accident; and when death results from personal injury such notice shall be given promptly after the knowledge of death comes to the said foreman or person in charge.

Inspector to be

Section 2. Whenever loss of life occurs or whenever the lives of persons employed in a mine or at a colliery are in danger from any accident, the inspector of mines shall visit the scene of the accident as soon as possible thereafter and offer such suggestions, as in his judgment shall be necessary, to protect the lives and secure the safety of the persons employed. case of death from such accident, and after examination he finds it necessary that a coroner's inquest shall be held, he shall notify the coroner to hold such inquest without delay, and if no such inquest be held by the coroner within twenty-four (24) hours after such notice, the inspector shall institute a further and fuller examination of such accident, and for this purpose he shall have power to compel the attendance of witnesses at such examination and to administer oaths and affirmations to persons testifying thereat. The inspector shall make a record of all such investigations and accidents, which record shall be preserved in his office. The costs of such investigation shall be paid by the county in which the accident occurred in like manner as costs of inquests held by coroners or justices of the peace are now paid. Section 3. An inquest held by the coroner upon the

Inspector shall visit scene of acci-

Shall notify coro-

If coroner fail to hold inquest inspector s vestigate. shall in-

Record shall be

Costs of investiga-

body of a person killed by explosion or other accident, shall be adjourned by the coroner if the inspector of mines be not present to watch the proceedings, and the coroner in such case shall notify the inspector, in writing, of such adjourned inquest, and the time and

place of holding the same, at least three (3) days pre-

vious thereto.

Coroner shall adjourn inquest if inspector is not present.

Notice of inquest.

Section 4. Due notice of an intended inquest to be held by the coroner, shall be given by the coroner to the inspector, and at any such inquest the inspector shall have the right to examine witnesses.

If accident occur from neglect coro-ner shall notify inspector.

Section 5. If, at any inquest held over the body or bodies of persons whose death was caused by an accident in or about a mine or colliery, the inspector be not present, and it is shown by the evidence given at the inquest that the accident was caused by neglect or by any defect in or about the mine or colliery, which in the judgment of the jury, requires a remedy, the coroner shall send notice in writing to said inspector of such neglect or default.

Qualifications of jurors.

Section 6. No person who is interested personally nor a person employed in the mine or a colliery in or at which loss of life has occurred by accident, shall be qualified to serve on a jury empaneled on the inquest, and a constable or other officer shall not summon such a person so disqualified as juror, but the coroner shall empanel a majority of the jury from miners who are qualified to judge of the nature of the accident; every person who fails to comply with the provisions of this article shall be guilty of an offense against this act.

#### ARTICLE XIV

# Returns, Notices, Et Cetera

Notices of death, shall be sent etc., shall be to inspector.

Contents of notice.

Section 1. Notices of death or serious injuries resulting from accidents in or about mines or collieries, shall be made to the inspector of mines, in writing, and shall specify the name, age and occupation of the person killed or injured, and also the nature and character of the accident and of the injury caused thereby. Section 2. The owner, operator or superintendent

When owner shall give notice to inspector.

New work commenced.

Mine abandoned.

Work recom-menced after abandonment.

to the inspector of the district in which said mine or colliery is situated in any or all of the following cases: First. Where any working is commenced for the purpose of opening a new slope or mine to which this

of a mine or colliery, shall, without delay, give notice

act applies. Second. Where any mine is abandoned or the workings thereof discontinued.

Third. Where the working of any mine is recommended after any abandonment or discontinuance for a period exceeding three months.

Fourth. Where any new coal breaker is completed When new breaker is completed. and work commenced therein for the purpose of preparing coal for market.

Fifth. Where the pillars of a mine are to be removed or robbed.

Removal of pil-

Sixth. Where a squeeze or crush or any other cause or change may seem to affect the safety of persons employed in any mine, or where fire occurs or a dangerous body of gas is found in any mine.

Squeeze, crush.

Section 3. On or before the first day of February in each year, the owner, operator or superintendent of every mine or colliery, shall send to the inspector of the district, a correct report specifying with respect to the year ending December thirty-first, previously, the name of the operator and officials of the mine, with his postoffice address; the quantity of coal mined, the amount of powder or other explosives consumed; the number of persons employed above and below ground in or about such colliery, classifying the persons so employed. The report shall be in such form Form. as may be from time to time prescribed by the inspector of the district. Blank forms for said reports shall be furnished by the Commonwealth.

Annual report by owner.

Contents of report.

#### ARTICLE XV

## Injunctions

Section 1. Upon application of the inspector of By injunction the mines of the proper district, acting in behalf of the court may sto work in mine. Commonwealth, any of the courts of law or equity having jurisdiction where the mine or colliery proceeded against is situated, whether any proceedings have or have not been taken, shall prohibit, by injunction or otherwise, the working of any mine or colliery in which any person is employed or is permitted to be for the purpose of working in contravention of the provisions of this act, and may award such costs in costs. the matter of the injunction or other proceedings as the court may think just; but this section shall be without prejudice to any other remedy permitted by law for enforcing the provisions of this act. Written written notice notice of the intention to apply for such injunction in owner. respect to any mine or colliery, shall be made to the owner, operator or superintendent of such mine or col-

liery not less than twenty-four (24) hours before the application is made.

## ARTICLE XVI

## Arbitration

When arbitration may be had.

Section 1. Whenever an inspector finds any mine or colliery or part thereof, or any matter, thing or practice connected with such mine, which in any respect thereof is not covered by or provided against by any provisions of this act or by any rule, to be dangerous or defective, or in his judgment tends to bodily injury to a person, he shall give notice thereof in writing to the owner, operator or superintendent of such mine or colliery, stating in such notice the particular matter or defect requiring remedy and may demand that the same be remedied; but the owner, operator or superintendent of said mine or colliery shall have the right to refer the demand of the inspector to a board of arbitration, and the matter shall then be arbitrated within forty-eight (48) hours of the time such complaint or demand be made. And the party against whom the award is given shall pay all cost attending the case. The said board of arbitration shall be composed of three (3) persons, one of whom shall be chosen by the inspector, one by the said owner, operator or superintendent and a third by the two thus selected. and the decision of a majority of such board shall be

How notices shall be given.

Right of owner.

Costs.

Arbitrators, how

Decision shall be

#### ARTICLE XVII

final and binding in the matter.

#### Penalties

On complaint of citizen the judge of quarter sessions court is authorized to hear and determine charges.

Section 1. Any judge of the court of quarter sessions of the peace of the county in which the mine or colliery, at which the offense, act or omission as hereinafter stated has occurred, is situated, is hereby authorized and required, upon the presentation to him of the affidavit of any citizen of the Commonwealth setting forth that the owner, operator or superintendent, or any other person employed in or about such mine or colliery had been negligently guilty of an offense against the provisions of this act, whereby a dangerous accident had resulted or might have re-

sulted to any person or persons employed in such mine or colliery, to issue a warrant to the sheriff of said county directing him to cause such person or persons to be arrested and brought before said judge, who Judge of court shall hear and determine the guilt or innocence of rant. the person or persons so charged; and if convicted he or they shall be sentenced to pay a fine not exceeding five hundred dollars, in all cases not otherwise pro- Penalty. vided for in this act, or an imprisonment in the county jail for a period not exceeding three (3) months, or both, at the discretion of the court: Provided, That any defendant may waive trial before a judge as herein Defendant may provided and at any time, at or before the time of such trial, demand a trial by a jury in the court of quarter sessions, in which case he may enter into a recognizance before said judge with such surety or Recognizance, sureties and in such sum as said judge may approve, conditioned for his appearance at the next court of quarter sessions to answer the charge against him and abide the orders of the court in the premises, meanwhile to be of good behavior and keep the peace, or in default of such recognizance to be committed to the county jail to await such trial.

shall issue war-

waive trial before judge and demand trial by jury.

Section 2. If any person shall feel himself aggrieved May appeal from conviction before by such conviction and sentence before a judge as aforesaid, he may appeal therefrom subject to the following conditions, namely: The appellant shall, within seven days after the decree has been made, give notice to the prosecutor of his intention to appeal, and within the same time enter into a recognizance, with such surety or sureties and in such sum as shall be approved by said judge, conditioned to appear and conditions of aptry such appeal before the next court of quarter sessions of the peace and to abide the judgment of the court thereon and to pay all such costs and penalties as may be there awarded, and upon the compliance with such conditions the judge shall release the appellant from custody pending the appeal.

judge.

Section 3. Nothing in this act shall prevent any per son from being indicted or liable under any other act, to any higher penalty or punishment than is herein provided, and if the court before whom any such proceeding is had shall be of the opinion that proceedings ought to be taken against such persons under

Shall not be a bar to indictment.

any other act, or otherwise, he may adjourn the case to enable such proceedings to be taken.

Offenses under this act declared misdemeanors and penalty prescribed. Section 4. All offenses under this act are declared to be misdemeanors and in default of payment of any penalty or cost by the party or parties sentenced to pay the same, he or they may be imprisoned for a period not exceeding three (3) months and not less than thirty (30) days.

Violation by mine inspector a misdemeanor.

Section 5. For any violation of duty by the mine inspector prescribed by this act, he shall be deemed guilty of a misdemeanor, and upon conviction, be sentenced to pay a fine of not more than three hundred dollars or be imprisoned for a period not exceeding three months, or either, or both, at the discretion of the court.

Disposition of

Penalty.

Section 6. All fines imposed under this act shall be paid into the county treasury for the use of the county.

Conviction or acquittal shall not be evidence in action for damages.

Section 7. No conviction or acquittal under this act, in any complaint, shall be received in evidence upon the trial of any action for damages arising from the negligence of any owner, operator or superintendent or employe in any mine or colliery.

Right of action shall accrue for injury to person or property by violation of act by owners, etc.

Section 8. That for any injury to person or property occasioned by any violation of this act or any failure to comply with its provisions by any owner, operator, superintendent, mine foreman or fire boss of any coal mine or colliery, a right of action shall accrue to the party injured against said owner or operator for any direct damages he may have sustained thereby; and in case of loss of life by reason of such neglect or failure aforesaid, a right of action shall accrue to the widow and lineal heirs of the person whose life shall be lost, for like recovery of damages for the injury they shall have sustained.

May accrue to widow.

#### ARTICLE XVIII

## Definition of Terms

Coal mine or colliery.

In this act, unless the context otherwise requires, the term "coal mine or colliery" includes every operation and work, both under and above ground, used or to be used for the purpose of mining and preparing coal.

The term "workings" includes all the excavated Workings. parts of a mine, those abandoned as well as the places actually at work.

The term "mine" includes all underground workings Mine. and excavations and shafts, tunnels and other ways and openings; also all such shafts, slopes, tunnels and other openings in course of being sunk or driven, together with all roads, appliances, machinery and materials connected with the same below the surface.

The term "shaft" means a vertical opening through shaft. the strata and which is or may be used for the purpose of ventilation or drainage or for hoisting men or material in connection with the mining of coal.

The term "slope" means any inclined way or open- slope. ing used for the same purpose as a shaft.

The term "breaker" means the structure containing Breaker. the machinery used for the preparation of coal.

son or body corporate who is the immediate proprietor or lessee or occupier of any coal mine or colliery The term "owner" does not inor any part thereof. clude a person or body corporate who merely receives a royalty, rent or fine from a coal mine or colliery or part thereof, or is merely the proprietor of the mine subject to any lease, grant or license for the working

The term "owners" and "operators" means any per- Owners and oper-

or operating thereof, or is merely the owner of the soil and not interested in the minerals of the mine or any part thereof. But any "contractor" for the working of a mine or colliery or any part or district thereof shall be subject to this act as an operator or owner, in like manner as if he were the owner.

Who are not included in term

Contractor shall be subject to this act as if he were owner.

The term "superintendent" means the person who superintendent. shall have, on behalf of the owner, general supervision of one or more mines or collieries.

#### ARTICLE XIX

All laws or parts of laws inconsistent or in conflict Repeal. with the provisions of this act are hereby repealed. Approved—The 2d day of June, A. D. 1891.

ROBT. E. PATTISON.

## AN ACT

Equalizing and fixing the compensation and mileage of the members of the several boards appointed under the provisions of the act approved June second, one thousand eight hundred and ninety-one, to examine candidates for appointment as inspectors, foremen and fire bosses, respectively, in the anthracite coal mines, and providing for the employment and compensation and mileage of a clerk to each of said boards.

Compensation and mileage of boards of examiners of mine inspectors and foremen.

Section 1. Be it enacted, &c., That from and after the passage of this act the members of the several boards appointed under the provisions of the act approved June second, one thousand eight hundred and ninety-one, to examine candidates for appointment respectively as inspectors and foremen of anthracite coal mines, shall receive in lieu of all compensation, mileage, expenses, emoluments or allowances heretofore paid them, as follows: Six dollars per day for each day during which the said members shall be actually in attendance on the sessions of the board, and mileage at the rate of five cents for each mile actually traveled going from the home of the member to the place of meeting of the board and returning from said place to his said home by the shortest practicable railway route: Provided, That mileage shall be paid but once for each continuous session of the board, and by a continuous session shall be meant a session during the course of which no adjournment for a longer period than forty-eight hours shall take place.

Proviso.

Boards may employ clerk.

Section 4, act of June 2, 1891, repealed.

Clerks shall be appointed hereafter under provisions of this act.

Members of board shall submit sworn statements of expenses to Auditor General. Section 2. Each of the boards enumerated or described in the first section of this act shall be and the same is hereby authorized to employ a clerk, whose compensation and mileage shall be the same as that of a member of the board. So much of section four of the act of June second, one thousand eight hundred and ninety-one, as authorizes the boards of examiners of candidates for inspectors of anthracite coal mines to engage the services of a clerk is hereby repealed, and all clerks hereafter appointed by the several boards hereinbefore mentioned shall be appointed under the provisions of this act.

Section 3. The members of the said boards shall, on the final adjournment of each session of their respective boards, submit to the Auditor General sworn statements approved by the president or chairman of their respective boards, setting forth the number of days during which each member shall have been actually in attendance on the sessions of the board of which he is a member during said session, as well as the distance from the home of the member to the place of meeting of his board as aforesaid, by the nearest practicable railway route, and the number of miles actually traveled by him; and the clerks of said boards shall submit like statements, and the Auditor General shall, upon the receipt of such sworn statements draw his warrant upon the State Treasurer in favor of each of such members and clerks for such sums as shall appear to be properly due each.

Clerks shall submit like statements.

Section 4. All acts and parts of acts or supplements thereto in conflict herewith are hereby repealed.

Repeal.

Approved—The 26th day of June, A. D. 1895.

DANIEL H. HASTINGS.

## AN ACT

To protect the lives and limbs of miners from the dangers resulting from incompetent miners working in the anthracite coal mines of this Commonwealth, and to provide for the examination of persons seeking employment as miners in the anthracite region, and to prevent the employment of incompetent persons as miners in anthracite coal mines, and providing penalties for a violation of the same.

Section 1. Be it enacted, &c., That hereafter no person whosoever shall be employed or engaged in the anthracite coal region of this Commonwealth, as a miner in any anthracite coal mine, without having obtained a certificate of competency and qualification so to do from the "Miners' Examining Board" of the proper district, and having been duly registered as herein provided.

Section 2. That there shall be established in each of the eight inspection districts in the anthracite coal region, a board to be styled the "Miners' Examining

Employment of miners without certificate of competency, etc., prohibited.

Miners' examining board established in each inspection district. Number of members and how appointed.

Qualifications.

Term of office.

When they shall be appointed.

Compensation and necessary expenses.

Shall not be paid out of the State Treasury.

Organization of boards.

Sub-committees.

What the words "Examining Board" include.

Board shall take an oath of office.

How vacancies shall be filled.

Examining boards shall designate place of meeting of committees.

Board" of the ..... district, to consist of nine miners who shall be appointed in the same manner as the boards to examine mine inspectors are now appointed from among the most skillful miners actually engaged in said business in their respective districts, and who must have had five years' practical The said persons so experience in the same. pointed shall each serve for a term of two years from the date on which their appointment takes effect, and they shall be appointed upon or before the expiration of the term of the present members of the "Miners' Examining Board," and they shall be and constitute the "Miners' Examining Board" for their respective districts, and shall hold the office for the term for which they were appointed, or until their successors are duly appointed and qualified, and shall receive as compensation for their services three dollars per day for each day actually engaged in this service, and all legitimate and necessary expenses incurred in attending the meetings of said board under the provisions of this act, and no part of the salary of said board or expenses thereof shall be paid out of the State Treasury.

Each of said boards shall organize by electing one of their members president, and one member as secretary, and by dividing themselves into three sub-committees for the more convenient discharge of their duties, each of said committees shall have all powers hereinafter conferred upon the board; and whenever in this act the words "Examining Board" are used, they shall be taken to include any of the committees thereof.

Every member of said board shall, within ten days of their appointment or being apprised of the same, take and subscribe an oath or affirmation before a properly qualified officer of the county in which they reside, that they will faithfully and impartially discharge the duties of their office.

Any vacancies occurring in said board shall be filled in the manner hereinbefore provided from among such only as are eligible for original appointment.

Section 3. Each of said examining boards shall designate some convenient place within their districts for the meeting of the several committees thereof, and

of which due notice shall be given by advertisement Notice to be given. in two or more newspapers of the proper county, and so divided as to reach as nearly as practicable all the mining districts therein; but in no case shall such meeting be held in a building where any intoxicating liquors are sold.

Shall not be held in building where liquors are sold.

Committee shall open book of registration.

Miners shall

Registration in case of removal.

Applications for registration.

Form of applica-

Fee for examination and registration.

How amounts received shall be expended.

port to court and Bureau of Mines and Mining.

Boards shall meet once every month.

Each of said committees shall open at the designated place of meeting a book of registration, in which shall be registered the name and address of each and every person duly qualified under this act to be employed as a miner in an anthracite coal mine. shall be the duty of all persons employed as miners to be properly registered, and in case of a removal from the district in which a miner is registered, it shall be his duty to be registered in the district to which he removes.

Application for registration only may be sent by mail to the board after being properly attested before any person authorized to administer an oath or affirmation in the county in which the applicant resides. The form of application shall be subject to such regulation as may be prescribed by the boards, but in no case shall any applicant be put to any unnecessary expense in order to secure registration.

Section 4. Each applicant for examination and registration and for the certificate hereinafter provided, shall pay a fee of one dollar to the said board, and a fee of twenty-five cents shall be charged for registering any person who shall have been examined and registered by any other said board, and the amount derived from this source shall be held by said boards and applied to the expenses and salaries herein provided and such as may arise under the provisions of this act; and the said boards shall report annually, to the court of common pleas of their respective counties and the Bureau of Mines and Mining all moneys received and disbursed under the provisions of this act, together with the number of miners examined and registered under this act and the number who failed to pass the required examination.

Section 5. That it shall be the duty of each of the said boards to meet once every month and not oftener, and said meeting shall be public, and if necessary, the meeting shall be continued to cover whatever portion Length of meeting may be required of a period of three days in succes-

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sion, and examine under oath all persons who shall desire to be employed as miners in their respective districts; and said board shall grant such persons as may be qualified, certificates of competency or qualification which shall entitle the holders thereof to be employed as and to do the work of miners as may be expressed in said certificate, and such certificates shall be good and sufficient evidence of registration and competency under this act; and the holder thereof shall be entitled to be registered without an examination in any other of the anthracite districts upon the payment of the fee herein provided.

Board shall grant certificate of competency, etc.

Holder can be registered in other districts.

Qualifications of applicant for certificate of competency.

Applicant must appear in person and answer.

And be properly identified.

Board shall keep record of all proceedings.

Contents of said

Certificates shall not be transferable.

Issuing of certifi-

Persons shall not engage as miners without certificate.

Nor shall persons employ such.

All persons applying for a certificate of competency, or to entitle them to be employed as miners, must produce satisfactory evidence of having had not less than two years' practical experience as a miner, or as a mine laborer in the mines of this Commonwealth, and in no case shall an applicant be deemed competent unless he appear in person before the said board and answer intelligently and correctly at least twelve question in the English language pertaining to the requirements of a practical miner, and be properly identified under oath, as a mine laborer by at least one practical miner holding miner's certificate. The said board shall keep an accurate record of the proceedings of all its meetings, and in said record shall show a correct detailed account of the examination of each applicant, with the questions asked and their answers, and at each of its meetings the board shall keep said record open for public inspection. Any miner's certificate granted under the provisions of this act, and the hereinafter mentioned act approved the ninth day of May, Anno Domini one thousand eight hundred and eighty-nine, shall not be transferable to any person or persons whatsoever, and any transfer of the same shall be deemed a violation of this act. shall be issued only at meetings of said board, and said certificates shall not be legal unless then and there signed in person by at least three members of said board.

Section 6. That no person shall hereafter engage as a miner in any anthracite coal mine without having obtained such certificate as aforesaid. And no person shall employ any person as a miner who does not hold such certificate as aforesaid, and no mine foreman or superintendent shall permit or suffer any person to be employed under him, or in the mines under his charge and supervision as a miner, who does not hold such certificate. Any person or persons who shall violate or fail to comply with the provisions of violation of act declared a misdethis act, shall be guilty of a misdemeanor, and on conviction thereof shall be sentenced to pay a fine not less than one hundred dollars and not to exceed five Penalty. hundred dollars, or shall undergo imprisonment for a term not less than thirty days and not to exceed six months, or either, or both, at the discretion of the court.

No. 12.

Section 7. The persons who are now serving as members of the Miners' Examining Board as created by the act approved the ninth day of May, Anno Domini one thousand eight hundred and eighty-nine, entitled "An act to provide for the examination of miners in the anthracite region of this Commonwealth, and to prevent the employment of incompetent persons as miners in anthracite coal mines," shall continue under the provisions of this act to serve as members of the "Miners' Examining Board" until the terms for which they were appointed under the provisions of the said act approved the ninth day of May, Anno Domini one thousand eight hundred and eighty-nine, shall have expired, and in the performance of the duties of their office they shall be subject to the provisions and requirements of this act.

Members of Miners' Examin-ing Board appoint-ed under act of May 9, 1889, shall continue until the expiration of their terms.

But shall be subject to the provisions of this act.

Construction of this act.

Section 8. Nothing in this act shall be construed to in any way, excepting as herein provided, affect miners' certificates which have been lawfully issued under the provisions of the herein mentioned act, approved the ninth day of May, Anno Domini one thousand eight hundred and eighty-nine.

Section 9. It shall be the duty of the several Miners' Examining Boards to investigate all complaints or charges of non compliance or violation of the provisions of this act, and to prosecute all persons so offending; and upon their failure so to do, then it shall become the duty of the district attorney of the county Duty of district attorney. wherein the complaints or charges are made to investigate the same and prosecute all persons so offending, and it shall at all times be the duty of the district attorney to prosecute such members of the Miners' Examining Board as have failed to perform their duty under the provisions of this act; but nothing herein

Board shall investigate com-plaints and prosecute offenders.

Citizens of this Commonwealth may prosecute. contained shall prevent any citizen a resident of this Commonwealth, from prosecuting any person or persons violating this act, with power to employ private counsel to assist in the prosecution of the same; upon conviction of any member of the Miners' Examining Board for any violation of this act, in addition to the penalties herein provided, his office shall be declared vacant, and he shall be deemed ineligible to act as a member of the said board.

Office may also be declared vacant.

Miners' Examining Board shall administer oath.

Section 10. For the purposes of this act the members of the said "Miners' Examining Board" shall have power to administer oaths.

Repeal.

Section 11. All acts or parts of acts inconsistent herewith are hereby repealed.

Approved—The 15th day of July, A. D. 1897.
DANIEL H. HASTINGS.

## AN ACT

To amend the tenth section of article ten of an act, entitled "An act to provide for the health and safety of persons employed in and about the anthracite coal mines of Pennsylvania, and for the protection and preservation of property connected therewith," approved the second day of June, Anno Domini one thousand eight hundred and ninety-one, providing that self-acting doors are used.

Section 1. Be it enacted, etc., That the tenth section of article ten of an act, entitled "An act to provide for the health and safety of persons employed in and about the anthracite coal mines of Pennsylvania, and for the protection and preservation of property connected therewith," approved the second day of June, Anno Domini one thousand eight hundred and ninetyone, which reads as follows:

Section 10 of article X of act of June 2, 1891, cited for amendment.

"All main doors shall have an attendant whose constant duty it shall be to open them for transportation and travel and prevent them from standing open longer than is necessary for persons or cars to pass through," be and the same is hereby amended to read as follows:

stant duty it shall be to open them for transportation and travel and prevent them for transportation and prevent them. longer than is necessary for persons or cars to pass through, unless a self-acting door is used which is approved by the inspector of the district.

Approved—The 20th day of April, A. D. 1899. WILLIAM A. STONE.

# AN ACT

To regulate the weight of all black blasting powder used, made, or sold in kegs, for use in the coal mines within the Commonwealth of Pennsylvania, and providing for the proper stamping of the kegs containing said powder, and making it unlawful for the use of any such kegs for containing said black blasting powder save only by the person, firm or corporation whose name is stamped on said kegs, and providing penalties for the violation of any of the provisions of this act.

Section 1. Be it enacted, &c., That on and after the first day of August, Anno Domini one thousand nine , hundred and one, each and every keg of black blasting powder used, manufactured of sold in and around the coal mines of this Commonwealth, shall contain twenty-five pounds of said black blasting powder. standard weight; every one-half keg shall contain twelve and a half pounds of said black blasting powder, standard weight, and every quarter keg shall contain six and one-quarter pounds of said black blasting powder, standard weight; each of said kegs to be plainly stamped with the name of the person, firm or corporation manufacturing said powder, and also the number of pounds of powder contained in said keg.

Section 2. Any manufacturer or dealer in said black violation of act. blasting powder, making or selling, or causing to be made or sold, any keg, half-keg or quarter-keg of said black blasting powder containing less weight of said powder than specified in this act, or which keg shall not be stamped as required in section one of this act,

Weight of kegs of blasting powder regulated.

Kegs to be stamped with weight of powder and name of manufacturer

Penalty.

shall be subject to a penalty of five dollars for each and every keg, half-keg or quarter-keg, manufactured or sold, which does not contain the respective weights of black blasting powder set forth in the foregoing section.

Wrongful use of kegs.

Section 3. It shall not be lawful for any other person, firm or corporation, save only such person, firm or corporation whose name shall be stamped on said kegs, to use any such stamped keg for the purpose of containing said black blasting powder.

Fine.

Section 4. Any person, firm or corporation violating the provisions of section three of this act shall be subject to a fine of not less than five hundred (\$500) dollars nor more than one thousand (\$1,000) dollars.

Repeal.

Section 5. All acts or parts of acts inconsistent herewith are hereby repealed.

Approved—The 24th day of April, A. D. 1901. WILLIAM A. STONE.

## AN ACT

Relating to anthracite mines, and providing for the care and life and attention of employes injured in and about said mines.

Emergency sup-

Section 1. Be it enacted, &c., That within six (6) months after the passage of this act, it shall be unlawful to operate any anthracite mine, employing ten (10) men or more, in the State of Pennsylvania, unless said mine is provided with a sufficient quantity of linseed or olive oil bandages, linen, splints, woolen and waterproof blankets. Said articles shall be stored in a room, erected at convenient place in the mine, which room shall not be less than eight by twelve feet, and sufficiently furnished, lighted, clean and ventilated so that therein medical treatment may be given injured employes in case of emergency. The furnishings shall be sufficient to accommodate two or more persons, in a reclining and sitting posture.

Medical room.

Duty of foreman and his assistants.

Section 2. It shall be the duty of the mine foreman or his assistants, in case of injury to any employe by explosion of gas or powder, or by any cause while said miners are at work in said mines, to at once visit the scene of accident, see that the injured is carefully care and treat-wrapped in woolen blankets and removed to the "med." ical room," and so treated with oils or other remedies as will add to the comfort and care of the patient. After being treated with all the skill known to the foreman or his assistants, the injured person shall be carefully wrapped up and sent to the surface, to be taken home in an ambulance or to the mining hospital, as may be desired, without expense to the injured party.

No. 12.

Section 3. Where accident to any employe involves injury to limbs or causes loss of blood, the foreman or his assistants shall see that the bandages, splints and linen shall be applied where necessary to prevent loss of blood and relieve pain. The foreman shall, in all cases, see that the injured person is sent to the surface without delay. He shall also keep a book show- Record to be kept. ing required articles on hand, name of persons injured, nature of injury, treatment, and by whom treated at time of accident.

Section 4. It shall be the duty of the mine inspector Duty of Inspector. to visit each of the medical rooms in his district at least once in six months; see that the law is complied with; examine records of the medical room. He shall notify the county coroner of any neglect or noncompliance with the provisions of this act by any operator, which information shall be regarded as evidence on any inquest that may be held on employes dying from injuries received while working in such anthracite mine.

Section 5. The neglect or refusal to perform the dut. Misdemeanor. ies required to be performed by any section of this act, by the parties therein required to perform them, or the violation of any of the requirements hereof, shall be deemed a misdemeanor, and shall, upon, conviction thereof in the court of quarter sessions of the county wherein the misdemeanor was committed, be punishable by a fine not exceeding five hundred dol. Fine and penalty. lars, or imprisonment in the county jail for a period not exceeding six months, or both, at the discretion of the court.

Section 6. That for any injury to employes, occa- Right of action, sioned by any violation of the act, or any failure to comply with its provisions, by any owners, operators or superintendent of any coal mine or colliery, a right

Recovery.

of action shall accrue to the party injured against said owner or operator, for any direct injuries he may have sustained thereby; and in case of loss of life, limb or bodily power, by reason of such neglect or failure aforesaid, a right of action shall accrue to the person, widow or lineal heirs, for the recovery of damages for the injury he or they shall have sustained.

Terms defined.

Section 7. The term "coal mine," as herein used, includes the shafts, slopes, drifts or inclined planes, connected with the excavations penetrating coal stratum or strata, which excavations are ventilated by one general air current, or division thereof, and connected by one general system of mine railroads, over which coal may be delivered to one or more parts outside the mine. The term "mine foreman" means the person who shall have, on behalf of the operators, immediate supervision of a coal mine. The term "operator" means any firm, corporation or individual operating any coal mine. The term "anthracite mine" shall include any coal mine not now included in the bituminous boundaries.

Repeal.

Section 8. That all acts or parts of acts inconsistent herewith be, and the same are hereby repealed, and all local laws inconsistent herewith are hereby repealed.

Approved—The 29th day of May, A. D. 1901. WILLIAM A. STONE.

# ARTICLE II OF THE ACT OF JUNE 2, 1891, AS AMENDED BY THE ACT OF JUNE 8, 1901.

Inspectors and Inspection Districts

Counties and their division into six districts.

Section 1. The counties of Luzerne, Lackawanna, Carbon, Schuylkill, Northumberland and Columbia, shall be divided into six inspection districts, as follows:

Districts.

Section 2. First district—The county of Luzerne. Second district—The county of Lackawanna. Third district—The county of Carbon. Fourth district—The county of Schuylkill. Fifth district—The county of Northumberland. Sixth district—The county of Columbia.

Filling of vacan-

Section 3. In order to fill any vacancy that may occur in the office of Inspector of Mines by reason of the expiration of term, resignation, removal for cause or

from any other reason whatever, the judges of the court of Lackawanna county shall appoint an examining board for the county of Lackawanna, and the judges of the court of Luzerne county shall appoint an examining board for the counties of Carbon and Luzerne, and the judges of Schuvlkill county shall appoint an examining board for the counties of Schuylkill. Northumberland and Columbia.

Section 4. The said Board of Examiners shall be Board of Examiners. composed of three reputable coal miners in actual practice and two reputable mining engineers, all of whom shall be appointed at the first term of court in each year, to hold their places during the year. Any vacancies that may occur in the Board of Examiners vacancies. shall be filled by the court as they occur. The said Board of Examiners shall be permitted to engage the services of a clerk, and they, together with the clerk Clerk. shall each receive the sum of five (5) dollars per day . Compensation and for every day they are actually engaged in the discharge of their duties under this appointment, and mileage at the rate of six cents per mile from their home to the place of meeting and return, by the nearest practicable railway route.

Section 5. Whenever candidates for the office of Inspector are to be examined, the said examiners shall give public notice of the fact in not more than five newspapers published in the inspection district, and at least two weeks before the meeting, specifying the time and place where such meeting shall be held. The said examiners shall be sworn to a faithful discharge of their duties, and at least four of them shall sign a certificate, setting forth the fact of the applicants having passed a successful examination, and who have answered ninety per centum of the questions; the names of the applicants, the questions asked and answers thereto, shall be sent to the Secretary of the Commonwealth, and published in at least two papers, daily or weekly, and shall give such certificate to only such applicant as has passed the required examination.

Section 6. The said Board of Examiners shall hold Examinations. at least one such examination during each year, at least six months before the date of the general election, in the month of November of each year.

Section 7. At the next general election in Novem- Election of inber, the qualified voters of the First inspection dis-

Notice of exam-ination to be pub-

Examiners to be

Recommendations to be sent to the Secretary of the Commonwealth.

Proviso.

Inspectors to be elected in November, 1902.

Election to fill vacancies.

trict shall elect five qualified persons to act as Mine Inspectors of this Commonwealth; the qualified voters of the Second inspection district shall elect four qualified persons to act as Mine Inspectors of this Commonwealth; the qualified voters of the Third inspection district shall elect one qualified person to act as Mine Inspector of this Commonwealth; the qualified voters of the Fourth inspection district shall elect four qualified persons to act as Mine Inspectors of this Commonwealth; the qualified voters of the Fifth inspection district shall elect one qualified person to act as Mine Inspector of this Commonwealth: Provided, That the present Mine Inspectors in the several inspection districts shall continue in office until the expiration of the terms for which they have been appointed, and the number of inspectors to be elected-at the coming election shall be reduced by the number of Inspectors now regularly appointed and serving in said districts. When the terms of the present Inspectors shall expire, their successors shall be elected in accordance with the provisions of this act. At the said first election under this act in November, Anno Domini one thousand nine hundred and two, for said Inspectors, the qualified electors of the First inspection district shall elect two Inspectors; the qualified electors of the Second inspection district shall elect two Inspectors; the qualified electors of the Fourth inspection district shall elect two inspectors; the qualified electors of the Fifth inspection district shall elect one Inspector; and the qualified electors of the Sixth inspection district shall elect one Inspector. At the expiration of the term of office of any of the present Inspectors, who hold office under the appointment of the Governor of the Commonwealth, the qualified electors of the Third inspection district shall elect one Inspector, and as further vacancies are caused by the expiration of the term of office of the present Inspectors, the qualified electors of the several inspection districts shall elect Inspectors to take their places, beginning with the First inspection district, then the Second inspection district, Third inspection district, Fourth inspection district, Fifth inspection district and Sixth inspection district, until each inspection district has its full quota of elected inspectors under this act. Said Inspectors, elected under this act, shall be

under the directions of the Chief of the Bureau of Mines, who shall assign districts to the several Inspectors in the respective counties in which they are elected.

Section 8. Candidates for the office of Mine Inspectificate with the county commissioners a certifitor shall file with the county commissioners a certificate from the mine examining board, as above set forth, before their names shall be allowed to go upon the ballot as provided by the county commissioners for the general election; and the name of no person shall be placed upon the official ballot except such as has filed the certificate as herein required; and no person shall be qualified to act as such Mine Inspector unless such certificate has been previously filed with the county commissioners of his county.

missioners.

Section 9. The person so elected must be a citizen Inspectors must of Pennsylvania and shall have attained the age of Pennsylvania. thirty years. He must have a knowledge of the different systems of work in coal mines, and he must produce satisfactory evidence to the Board of Examiners of having had at least five years' practical ex- Experience reperience in anthracite coal mines of Pennsylvania. He must have had experience in coal mines where noxious and explosive gases are evolved.

Before entering upon the duties of his office he shall Shall be sworn. take an oath or affirmation, before an officer properly qualified to administer the same, that he will perform his duties with fidelity and impartiality; which oath or affirmation shall be filed in the office of the prothon- Filing of oath. otary of the county. He shall provide himself with the most modern instruments and appliances for carrying out the intentions of this act.

Section 10. The salary of each of the said Inspectors salary. shall be three thousand dollars per annum, which salary, together with the expenses incurred in carrying into effect the provisions of this act, shall be paid by the State Treasurer out of the Treasury of the Commonwealth upon the warrant of the Auditor General.

Section 11. Each of the said Inspectors shall hold Term of office. said office for a term of three years from the first Monday of January immediately succeeding his election to said office, and until his successor is duly elected and qualified.

Section 12. It shall be the duty of the Chief of Bureau of Mines and Mining to direct one or more of Inspection of collieries in other counties than those named.

the Inspectors who shall be elected under this act, and it shall be the duty of said Inspectors to obey said orders of the said Chief of Bureau of Mines and Mining, to inspect such collieries as come under the act to which this act is an amendment in counties not mentioned in this amendment to said act, in such manner and at such times as is required by law, and the inspectors inspecting said collieries shall make and include in their return a due report of said inspection.

Appointment to fill vacancies.

Section 13. In case of death, resignation, removal from office, or other vacancies in the office of Mine Inspector before the expiration of said term of office, the judges of the court of common pleas of the county in which said vacancy occurs shall appoint a duly qualified person to fill said vacancy for the unexpired term. Said appointee to be one of the persons having filed with the county commissioners of said county a certificate from the Board of Examiners, showing he passed a successful examination before the said Board, and is duly qualified as hereinbefore mentioned.

Appointee shall have filed a certificate.

Section 14. In case the Inspector becomes incapacitated to perform the duties of his office for a longer period than two weeks, it shall be the duty of the judges of the court of common pleas of the county from which said Inspector was elected to deputize some competent person, recommended by the Board of Examiners, to fill the office of Inspector until the said Inspector shall be able to fulfil the duties of his office, and the person so appointed shall be paid in the same manner as is provided for the Inspector of Mines.

When and how deputy may be appointed.

Inspectors shall reside in district where elected.

Duties

Ventilation,

Reports.

Section 15. Each of the said Inspectors shall reside in the district for which he is elected, and shall give his whole time and attention to the duties of his office. He shall examine all the collieries in his district at least once every two months, as often in addition thereto as the necessities of the case or the condition of the mines require. He shall see that every necessary precaution is taken to secure the safety of the workmen and that the provisions of this act are observed and obeyed; and he shall personally visit each working face, and see that the air-current is carried to the working faces and is of sufficient quantity or volume to thoroughly ventilate the places. He shall every three months make a report of the condition of

each working face in each colliery, on a form to be furnished to the inspectors by the Chief of the Bureau of Mines and Mining, designating the gangway in which the working is situated, and the breast number of said working and their condition shall be designated by the words, good, fair, or bad, as the circumstances may warrant; and the said report, or a dupli-Reports to be excate, shall be placed in a weather and dust-proof case, with a glass front; said case to be furnished by the operator, and placed in a conspicuous place at each mine opening, shaft, slope or drift, so that the workmen have easy access thereto. He shall certify in said report that the employes are hoisted to the surface of the ground or given access thereto according to law; he shall attend every inquest held by the coroner or his deputy upon the bodies of persons killed in or about the collieries in his district; he shall visit the scene of the accident, for the purpose of making an examination into the particulars of the same, wherever loss of life or serious personal injury occurs, as elsewhere herein provided for, and make an annual Annual report. report of his proceedings to the Secretary of Internal Affairs of the Commonwealth at the close of every year, enumerating all the accidents in and about the collieries in his district, marking in tabular form those accidents causing death or serious personal injury; the condition of the workings of the said mines with regard to the safety of the workmen therein and the ventilation thereof, and the results generally shall be fully set forth; and such other duties as now are or hereafter may be required by law.

Section 16. The nomination and election of said mine inspectors shall be under the general election laws of this Commonwealth.

Section 17. The Mine Inspector shall have the right, and it is hereby made his duty, to enter, inspect and examine any mine or colliery in the territory allotted to him and the workings and machinery belonging thereto, at all reasonable times, either by day or by night, but not so as to obstruct or impede the working of the colliery, and shall have power to take one or more of his fellow inspectors into or around any mine or colliery in the territory allotted to him, for the purpose of consultation or examination.

Certificate.

Shall attend in-

Elections.

To have right of entry, and may be accompanied by another inspector. Shall inquire into the condition of mine or colliery. He shall also have the right, and it is hereby made his duty to make inquiry into the condition of such mine or colliery workings, machinery, ventilation, drainage, method of lighting or using lights, and into all matters and things connected with or relating to, as well as to make suggestions providing for, the health and safety of persons employed in or about the same, and especially to make inquiry whether the provisions of this act have been complied with.

Owner to furnish

The owner, operator or superintendent of such mine or colliery is hereby required to furnish the means necessary for such entry, inspection, examination, inquiry and exit.

Record.

The inspector shall make a record of the visit, noting the time and material circumstances of the inspection.

Inspectors shall not be pecuniarily interested.

Section 18. No person who shall act or practice as a land agent or as a manager or agent of any coal mine or colliery, who is pecuniarily interested in operating any coal mine or colliery, shall at the same time hold the office of Inspector of Mines under this act.

Charges of neglect or incompetency, how they shall be presented, etc

Section 19. Whenever a petition signed by fifty or more reputable coal miners, or by fifteen or more reputable coal operators, or more, or both, setting forth that any inspector of mines neglects his duties, or is incompetent, or is guilty of malfeasance in office, it shall be the duty of the court of common pleas from which said Inspector was elected to issue a citation, in the name of the Commonwealth, to the said Inspector to appear at not less than five days' notice, on a day fixed, before said court, and the court shall then proceed to inquire into and investigate the allegations of the petitioners. If the court finds that the said Inspector is neglectful of his duties, or is incompetent to perform the duties of his office for any cause that existed previous to his election, or that has arisen since his election, or that he is guilty of malfeasance in office, the court shall declare the said Inspector removed from office and proceed to fill the vacancy. The cost of said investigation shall be borne by the removed Inspector; but if the allegations in the petition are not sustained, the cost shall be paid by the Treasurer of this Commonwealth upon warrant of the Auditor General, or by the petitioners in case the court

Removal.

Costs.

finds that there was no probable ground for said charge.

Section 20. The maps and plans of the mines and the records thereof, together with all the papers relating thereto, shall be kept by the inspector, properly arranged and preserved, in a convenient place in the territory to which the inspector has been allotted, and shall be transferred by him, with any other property of the Commonwealth that may be in his possession. to his successor in office.

Maps and plans of mines.

Section 21. This act shall go into effect from the Act to take effect. first day of January, Anno Domini one thousand nine hundred and two.

Section 22. All acts or parts of acts inconsistent Repeal. with the provisions of this act are hereby repealed.

Approved—The 8th day of June, A. D. 1901.

WILLIAM A. STONE.

#### AN ACT

To provide payment to the miner for all clean coal mined by him.

Section 1. Be it enacted, &c., That from and after the passage of this act all individuals, firms and corporations engaged in mining coal in this Commonwealth, who, instead of dumping all the cars that come from the mine into a breaker or chutes, shall switch out one or more of the cars for the purpose of examining them, and determining the actual amount of slate or refuse, by removing said slate or refuse from the car, and who shall, after so doing, wilfully neglect to allow the miner in full for all clean coal left after the refuse, dirt or slate is taken out, at the same rate paid at the mine for clean coal less the actual expense of removing said slate or refuse, they shall be deemed guilty of a misdemeanor.

Wilful neglect to pay miner for all clean coal, less the cost of clean-

Section 2. That any individual, firm or corporation Penalty. as aforesaid, violating the provisions of this act, upon suit being brought and conviction had, shall be sentenced by the court to pay a fine of not more than one hundred dollars, and to make restitution by paying to the miner the amount to which, under this act, he

Restitution to be

would be entitled for the coal mined by him, and for which he was not paid.

Approved—The 13th day of June, A. D. 1§83. ROBT. E. PATTISON.

#### AN ACT

To provide for the recovery of the bodies of workmen enclosed, buried or entombed in coal mines.

Duty of court.

Section 1. Be it enacted, &c., That whenever any workman or workmen shall heretofore have been, or shall hereafter be enclosed, entombed or buried in any coal mine in this Commonwealth, it shall be the duty of the court, sitting in equity, in the county wherein such workman or workmen are enclosed, entombed or buried, upon the petition of any of the relatives of those enclosed, entombed or buried, to make an order of court for the petitioner to take testimony in order that the court may ascertain whether such workman or workmen, or the body or bodies of such workman or workmen, can be recovered or taken out of said mine.

Mandamus to owner, etc., of mines for recovery of bodies. If, after full hearing, it shall appear to the court that such undertaking is feasible or practicable, said court may forthwith issue a peremptory mandamus to the owner or owners, lessee or lessees, operator or operators of such coal company, to forthwith proceed to work for and recover and take out the body or bodies of such workman or workmen, and said court shall have full authority to enforce such peremptory mandamus in the manner already provided for the enforcement of such process.

Approved—The 9th day of May, A. D. 1889.

JAMES A. BEAVER.

#### AN ACT

For the better protection of employes in and about the coal mines by preventing mine superintendents, mine foremen and assistants from receiving or soliciting any sums of money or other valuable consideration from men while in their employ, and providing a penalty for violation of the same.

Section 1. Be it enacted, &c., That on and after the passage of this act any mine superintendent, mine foreman or assistant foreman, or any other person or persons who shall receive or solicit any sum of money or other valuable consideration, from any of his or their employes for the purpose of continuing in his or their employ, or for the purpose of procuring employment, shall be guilty of a misdemeanor, and upon conviction shall be subject to a fine not less than fifty dollars, nor more than three hundred dollars, or undergo an imprisonment of not less than six months, or both, at the discretion of the court.

Receiving or soliciting money de-clared a misde-meanor.

Section 2. All acts or parts of acts inconsistent Repeal. herewith be and the same are hereby repealed.

Approved—The 15th day of June, A. D. 1897.

DANIEL H. HASTINGS.

#### AN ACT

To amend article nine, section one, of an act, entitled "An act to provide for the health and the safety of persons employed in and about the anthracite coal mines of Pennsylvania, and for the protection and preservation of property connected therewith,' approved June second, one thousand eight hundred and ninety-one; also to amend section seventeen of an act, entitled "An act relating to bituminous coal mines, and providing for the lives, health, safety and welfare of persons employed therein," approved June thirtieth, one thousand eight hundred and eighty-five.

Section 1. Be it enacted, &c., That the first section of article nine of an act, entitled "An act to provide for the health and safety of persons employed in and about the anthracite coal mines of Pennsylvania, and for the protection and preservation of property con-

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nected therewith," approved June second, one thousand eight hundred and ninety-one, which reads as follows.

Section 1, article IX, act of June 2, 1891, cited for amendment.

"No boy under the age of fourteen years, and no woman or girl of any age, shall be employed or permitted to be in any mine for the purpose of employment therein. Nor shall a boy under the age of twelve years, or a woman or girl of any age, be employed or permitted to be in or about the outside structures or workings of a colliery for the purpose of employment, but it is provided, however, that this prohibition shall not affect the employment of a boy or female of suitable age in an office or in the performance of clerical work at a colliery;" be amended so that the same shall read as follows:

Employment of boys under certain ages and of all females forbidden. mitted to be in any mine for the purpose of employment therein. Nor shall a boy under the age of fourteen years, or a woman or girl of any age, be employed or permitted to be in or about the outside structures or workings of a colliery for the purpose of employment; but it is provided, however, that this prohibition shall not affect the employment of a boy or female, of suitable age, in an office or in the perform-

No boy under the age of sixteen years, and no woman or girl of any age, shall be employed or per-

Except for office or clerical work.

Section 2. That the first section of article nine of an act, entitled "An act relating to bituminous coal mines, and providing for the lives, health, safety and welfare of persons employed therein," approved June thirtieth, one thousand eight hundred and eighty-five, which reads as follows:

ance of clerical work at a colliery.

Section 1, article IX, act of June 30, 1885, cited for amendment.

"No boy under the age of fourteen years, and no woman or girl of any age, shall be employed or permitted to be in any mine for the purpose of employment therein; nor shall a boy under the age of twelve years, or a woman or girl of any age, be employed or permitted to be in or about the outside structures or workings of a colliery for the purpose of employment, but it is provided, however, that this prohibition shall not affect the employment of a boy or female, of suitable age, in an office or in the performance of clerical work at a colliery," be amended so that the same shall read as follows:

No boy under the age of sixteen years, and no woman or girl of any age, shall be employed or permitted to be in any mine for the purpose of employment therein; nor shall a boy under the age of fourteen years, or a woman or girl of any age, be employed or permitted to be in or about the outside structures or workings of a colliery for the purpose of employ- Except for office ment; but it is provided, however, that this prohibition shall not affect the employment of a boy or female, of suitable age, in an office or in the performance of clerical work at a colliery.

or clerical work.

Approved—The 13th day of May, A. D. 1903. SAML. W. PENNYPACKER.

Abstract of act of April 14, 1903, establishing a Department of Mines in Pennsylvania:

#### AN ACT

To establish a Department of Mines in Pennsylvania; Department of Mines. defining its purposes and authority; providing for the appointment of a Chief of said Department, and assistants, and fixing their salaries and expenses.

Section 1. Be it enacted, &c., That there is hereby established in Pennsylvania a Department known as the Department of Mines, which shall be charged with the of. Duties and powers supervision of the execution of the mining laws of this Commonwealth, and the care and publication of the annual reports of the inspectors of coal mines and any and all other mines that may come under the provisions of the mining laws of this Commonwealth.

Section 2. The chief officer of this Department shall be denominated Chief of the Department of Mines, and shall be appointed by the Governor, by and with Appointment by Governor. the advice and consent of the Senate, within thirty days after the final passage of this act, and every four vears thereafter, who shall be commissioned by the Governor to serve a term of four years from the date of his appointment, and until his successor is duly qualified.

Chief of the Deartment of Mines

Section 3. The Chief of the Department of Mines Qualification. shall be a competent person, having at least ten years' practical experience as a miner and the qualifications of the present mine inspectors. The said Chief of the

Oath.

Bond.

Department of Mines, so appointed shall, before entering upon the duties of his office, take and subscribe to the oath of office prescribed by the Constitution, the same to be filed in the office of the Secretary of the Commonwealth, and give to the Commonwealth a bond in the penal sum of ten thousand dollars, with surety, to be approved by the Governor, conditioned for the faithful discharge of the duties of his office.

Power and authority of the Chief.

May suspend mine inspectors for neglect of duty.

Appeal

Petition of miners or operators.

Investigation.

Citation.

Inquiry by the court.

Section 4. It shall be the duty of the Chief of the Department to devote the whole of his time to duties of his office, and to see that the mining laws of the State are faithfully executed; and for this purpose he is hereby invested with the same power and authority as the mine inspectors, to enter, inspect and examine any mine or colliery within the State, and the works and machinery connected therewith, and to give such aid and instruction to the mine inspectors, from time to time, as he may deem best calculated to protect the health and promote the safety of all persons employed in and about the mines; and the said Chief of the Department of Mines shall have the power to suspend any mine inspector for any neglect of duty, but such supended mine inspector shall have the right of appeal to the Governor, who shall be empowered to approve of such suspension or restore such suspended mine inspector to duty, after investigating the causes which led to such suspension. Chief of Department of Mines receive information by petition, signed by ten or more miners or three or more operators, setting forth that any of the mine inspectors are neglectful of the duties of their office, or are physically unable to perform the duties of their office, or are guilty of malfeasance in office, he shall at once investigate the matter; and if he shall be satisfied that the charge or charges are well founded, he shall then petition the court of common pleas or the judge in chambers, in any county within or partly within the inspection district of the said mine inspector, which court upon receipt of said petition and a report of the character of the charges and testimony produced, shall at once issue a citation, in the name of the Commonwealth, to the said inspector to appear, on not less than fifteen days' notice, on a fixed day, before said court, at which time the court shall proceed to inquire into the allegations of the petitioners,

and may require the attendance of such witnesses, on the subpoena issued and served by the proper officer or officers, as the judge of the court and the Chief of said Department may deem necessary in the case; the inspector under investigation shall also have similar power and authority to compel the attendance of witnesses in his behalf. If the court shall find by said investigation that the said mine inspector is guilty of neglecting his official duties, or is physically incompetent to perform the duties of his office, or is guilty of malfeasance in office, the said court shall certify the same to the Governor, who shall declare the office Certificate of court to the Governor. vacant, and shall proceed to supply the vacancy as provided by the mining laws of the State. The cost The cost. of such investigation shall, if the charges are sustained, be imposed upon the deposed mine inspector; but if the charges are not sustained, the costs shall be paid out of the State Treasury, upon voucher or vouchers duly certified by said Chief of Department.

To enable said Chief of the Department of Mines to conduct more effectually his examinations and investigations of the charge and complaints which may be made by petitioners against any of the mine inspectors as herein provided, he shall have power to administer oaths and take affidavits and depositions, in form and manner provided by law: Provided, however, That nothing in this section shall be construed as to repeal section thirteen of article two of the act of Assembly, approved the second day of June, Anno Domini one thousand eight hundred and ninety-one, entitled "An act to provide for the health and safety of persons employed in and about the anthracite coal mines of Pennsylvania, and for the protection and preservation of property connected therewith," and also articles thirteen and fourteen of an act of Assembly, approved the fifteenth day of May, Anno Domini one thousand eight hundred and ninety-three, entitled "An act relating to bituminous coal mines, and providing for the lives, health, safety and welfare of persons employed therein."

Section 5. It shall be the duty of the Chief of the Department of Mines to take charge of, and preserve in his office, the annual reports of the mine inspectors, and transmit a synopsis of them, together with such

Chief of Depart-ment empowered to administer oaths and take af-

Proviso.

Annual reports of

Publication of re-

Reports to be delivered to Chief on or before February 20, annually,

Monthly reports and special information.

Blanks.

Form and subject matter of reports.

Examination and investigation by the Chief

other statistical data compiled therefrom, and other work of the Department as may be of public interest, properly addressed, to the Governor, to be transmitted to the General Assembly of this Commonwealth, on or before the 15th day of March in each year. It shall also be the duty of the Chief of Department of Mines to see that said reports are placed in the hands of the public printer for publication, on or before the first day of April in each year; the same to be published under the direction of the Chief of the Department of Mines. In order that the Chief of the said Department may be able to prepare, compile and transmit a synopsis of his annual report to the Governor within the time herein specified, the mine inspectors are hereby required to deliver their annual reports to the Chief of said Department on or before the twentieth day of February, in each year. In addition to the annual reports herein required of the mine inspectors, they shall furnish the Chief of the Department of Mines monthly reports, and also such special information on any subject regarding mine accidents, or other matters pertaining to mining interests, or the safety of persons employed in and about the mines, as he at any time may require or may deem necessary, in the proper and lawful discharge of his official duties. The Chief of the Department of Mines shall also establish, as far as may be practicable, a uniform style and size of blanks for the annual, monthly and special reports of the mine inspectors, and prescribe the form and subject matter to be embraced in the text and the tabulated statements of their reports.

The Chief of the Department of Mines is hereby authorized to make such examinations and investigations as may enable him to report on the various systems of coal mining and all other mining practiced in the State, method of mining ventilation and machinery employed, the circumstances and responsibilities of mine accidents; and such other matters as may pertain to the general welfare of coal miners and others connected with mining, and the interests of mine owners and operators in the Commonwealth.

Duty of Board of Examiners, etc. Section 6. The Board of Examiners for the examination of applicants for mine inspectors in the Anthracite and Bituminous coal mines of the Common-

wealth, the Board for the examination of applicants for mine foremen and assistant mine foremen in the Anthracite mines, the Board for the examination of applicants for first and second grade certificates in the Bituminous mines, and the Board styled Miners' Examining Board for applicants for certificates of competency as miners, shall send to the Chief of the Department of Mines duplicates of the manuscripts Duplicate papers. and all other papers of applicants, together with the tally-sheets and the solution of each question as given by the Examining Board, which shall be filed in the Filing of. Department as public documents.

Section 7. Certificates of qualification to mine fore- Certificates of men and assistant mine foremen in the Anthracite mines, first and second grade certificates for mine foremen in the Bituminous mines, shall be granted by the Chief of the Department of Mines to each applicant who has passed a successful examination. The certificates shall be in manner and form as shall be prescribed by the Chief of the Department of Mines, and a record of all certificates granted shall be kept in the Record of. Department. Each certificate shall contain the full Contents of. name, age and place of birth of the applicant, and also the length and nature of his previous service in the mines. Before the certificates aforesaid shall be granted to mine foremen, assistant mine foremen, foremen of first grade and foremen of second grade, each applicant for the same shall pay the sum of three Fee. dollars to the Chief of the Department of Mines. The money so received, less the cost of issuing and recording certificates, shall be turned over in due form to the State Treasurer.

Section 8. The Chief of the Department of Mines Journal to be

shall keep in the Department a journal or record of all inspections, examinations and work done under his administration, and copies of all official communications; and is hereby authorized to procure such books, instruments, and chemicals, or other tests, as Books, instruments, chemicals, may be found necessary to the proper discharge of his duties under this act, at the expense of the State. All instruments, plans, books and records pertaining to the office shall be the property of the State, and

shall be delivered to his successor in office.

Eligibility of Chief.

Section 11. No person who is acting as a land agent, or as a manager, viewer or agent of any mine or colliery, shall at the same time, serve as Chief of the Department of Mines under the provisions of this act.

Repeal.

Section 12. All acts or parts of acts inconsistent with this act be and the same are hereby repealed.

Approved—The 14th day of April, A. D. 1903.

SAML. W. PENNYPACKER.

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TO

## ANTHRACITE LAWS

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